The Mining Journal

RAILWAY AND COMMERCIAL GAZETTE.

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

No. 687.—Vol. XVIII. LONDON, SATURDAY, OCTOBER 21, 1848. [Price 6d.

Stannaries of Cornwall—In the Vice-Warden's Court.

HUTCHINSON *v.* DAVEY.

WHEREAS the VICE-WARDEN did, by an ORDER, or DECREE, made in this cause, and bearing date the 28th day of August last, Order and Decree that a SALE be made of the PARTS, or SHARES, and INTEREST of the defendant in SOUTH ROSKEAR MINE, in the parish of CAMBORNE, within the said Stannaries, under the direction of the Registrar of this Court, and that the proceeds of such sale should be applied by the said Registrar in the manner directed by the said Order or Decree.

Notice is hereby given, that, pursuant to the said DECREE, a PUBLIC AUCTION will be HOLDEN, at ANDREW'S HOTEL, REDRUTH, on Thursday, the 2d day of November next, at Two o'clock in the afternoon, for SELLING, in such lots as shall be then and there determined on, TEN (116ths) PARTS, or SHARES, of and in the said mine, and the LIKE PARTS, or SHARES, of and in the ORES, HALVANS, MACHINERY and MATERIALS, and OTHER EFFECTS upon and belonging to the said mine.

For further information, application may be made to Mr. Stokes, solicitor, Truro.

Dated Registrar's Office, Truro, Oct. 18, 1848.

POWERFUL STEAM-ENGINE, TWO WATER-WHEELS, AND MINE MATERIALS, FOR POSITIVE SALE.

MR. F. A. DAVIS will SELL, BY AUCTION, on Tuesday, the 31st day of October, 1848, at Twelve o'clock at noon, at WHEAL MARTHA MINE, at LUCKITT, in STOKECLIMSLAND, the under-mentioned

MATERIALS AND MACHINERY OF THE SAID MINE.

Comprising—14 9-feet 11-inch pumps, 3 9-feet 9-inch ditto, 1 3-feet 9-inch ditto, 2 9-feet 10-inch working barrels, 1 10-inch door-piece, 1 14-inch plunger-pole and case, stuffing-box and gland brass bushed, 1 9-inch plunger-pole, lot of chain, 40 fathoms 1¼ rods, pullies and stands, 2 balance-bobs, with bearings and brasses, 4 sweep rods with caps, double and single checks, staples and glands of different sizes, lot of hammered and crown iron-plates and caps, whim sheaves, windlass, 2 winze kibbles, 1 2¼-inch iron-rod, beam, scales, and weights, 2 7-inch bend pipes, 1 30-inch and 1 40-inch smith's bellows, about 3 cwts. of powder, several brass bottoms, lot of ladders, smith's horse, vice, pick moulds, smith's crane, a quantity of rod bolts and burs, pump rings, &c., miners tools, door hinges, new and old iron, miners and smiths' chests, barrows, &c., water barrels, shovel hilts, sieves, leather, &c., a large quantity of timber, composing several houses and sheds, carpenters' benches, saw-pit frames, &c., &c.

TWO WATER-WHEELS, one 40 feet diameter, 4 feet breast, and one 30 feet diameter, 3 feet breast—both having cast-iron rings, sockets, and cylinder ends, and in excellent condition.

Also, a very powerful STEAM-ENGINE (nearly new), on the combined principle of Messrs. Harvey, and Co., from the drawings of Mr. William West, with 60 and 32-inch cylinder, equal to 141-horse power, with a boiler, 9 tons.

Refreshments punctually at Eleven o'clock.

County Fire and Provident Life Offices, West-street, Tavistock, Oct. 11, 1848.

FLINTSHIRE.—TO BE SOLD, BY AUCTION, on Thursday, the 26th day of October next, at Three o'clock in the afternoon, at the Ship Inn, in FLINT, in the county of Flint (unless in the meantime disposed of by private treaty, of which due notice will be given), subject to conditions to be then and there produced, all those FREEHOLD LEAD and ALKALI WORKS, situated at Flint, aforesaid.

The LEAD WORKS contain smelting furnaces, slag hearths, refineries, crushing-mills, red lead ovens, with grinding apparatus for eight ovens, &c., and one of the finest rolling-mills in the kingdom, nearly new, with width of rolls of 9 ft. 2 in.; three steam-engines stand on the premises, which have also the advantage of water-power, by means of a reservoir, supplied by a large stream of water, working two wheels.

The ALKALI WORKS consist of lead chambers, furnaces, vats and pans, &c., complete, and are adapted for the manufacture of 30 tons of soda ash per week.

The whole premises, which are freehold of inheritance, embrace about 8 acres of land, and stand on one of the deepest points of the River Dee, where vessels of large size can lie in safety; and, by means of a wharf and crane, can be laden and unladen with the greatest facility.

Coal is brought to the doors of the furnaces, by a railway from adjacent collieries.

A good turnpike-road, and the Chester and Holyhead Railway, run through the property—the latter having a station at a distance of about 200 yards; and altogether, the situation of the premises cannot be surpassed, and stands unequalled for the beneficially carrying on of a great and extensive business.

The recent expiration of Mr. Pattinson's patent, for the desilverising of lead, affords great advantage, and makes the present a valuable opportunity for the profitable investment of capital.

The foregoing premises formed the well-known and long-established works of the late firm of George Roskell and Co.—late deaths of proprietors have rendered it necessary to have the same disposed of.

A good house, with spacious offices, stands on the premises.

For all further particulars, or to treat, apply to Geo. Potts Roskell, Esq., Stockyn, Holywell, Flintshire; Mr. Williamson, solicitor, Holywell; or to Mr. Wm. Williamson, solicitor, Holywell.—Holywell, Sept., 1848.

FLINTSHIRE—HOLYWELL AND GREENFIELD.—TO BE LET, OR SOLD, the extensive PREMISES known as the GREENFIELD ZINC WORKS, situate on the banks of the RIVER DEE, about one mile from Holywell, and close to the station on the Chester and Holyhead Railway.

These premises are freehold, and the valuable buildings, furnaces, offices, &c., have been erected within the last six years, in the best possible manner; a small outlay will, therefore, only be required to place them in working order for smelting any description of ore—or they may be readily converted into any manufactory, where extensive premises are required to carry on the business.

The Chester and Holyhead Railway runs through the property, and there is, in addition, a wharf on the premises, with crane, and every convenience for loading and discharging vessels of large burthen with the greatest possible facility.

Coal is most plentiful in the neighbourhood.

For particulars, terms, &c., apply to Mr. John Langhorne, Halkin, near Holywell; or to Harry Sarman, Esq., 11, New-square, Lincoln's Inn, London.

VAUXHALL FOUNDRY, LIVERPOOL—TO CLOSE A PARTNERSHIP.—TO BE SOLD, the whole of that valuable PROPERTY, known as the VAUXHALL FOUNDRY, VAUXHALL-ROAD, LIVERPOOL, consisting of upwards of 5500 yards of freehold, and 3000 yards of leasehold, land (75 years, at a low ground rent), with all the VALUABLE WORKSHOPS, MACHINERY, TOOLS, MODELS, &c. &c.

The PREMISES are all of the most substantial and convenient description, and the MACHINERY and TOOLS are of the most approved construction, adapted to the manufacture of the largest description of steam-engines, and every variety of machinery.

The valuable STOCK of MODELS have been all made within the last 20 years, and comprise all those requisite for the carrying on an extensive business.

To any parties of capital, this will be found a singularly desirable opportunity, as the works are in full operation—the reputation of the place established, and the business connections of the highest class.

For further particulars, apply to Messrs. Laces, Myers, Rigge, and Roscoe, solicitors, Liverpool.—If not sold by private treaty, the whole will be offered by public auction in the month of April, 1849, of which due notice will be given.

Liverpool, Oct. 19, 1848.

VALUABLE MINING PROPERTY.—TO BE SOLD, BY TENDER, in one lot, WHEAL LOUISA COPPER MINE, situated in ST. STEPHENS, near St. Austell, CORNWALL, with the MACHINERY and MATERIALS belonging to the same, which are in excellent condition, and afford an opportunity of working, at a trifling cost, an exceedingly promising mine. The engine-shaft has been sunk 30 fathoms—the lode has been cut at this level, and is about 12 feet wide, very regular, composed of flookan and quartz, spotted with rich copper ore, and has been pronounced, by several experienced miners a very promising speculation—the machinery being of sufficient power to take it down full 30 fathoms deeper.

Tenders will be received not later than six o'clock in the evening of Tuesday, the 31st inst., addressed to the purser, at the New Inn, Torpoint: 20 per cent. of the purchase-money will be expected to be paid immediately on the tender being accepted, and the remainder on or before the 14th of November.

Further particulars may be known on application to Mr. W. H. Smith, mine agent, Copthall Chambers, London; Capt. John Dale, St. Stephens, near St. Austell; or to Capt. J. Hitchens, Great Rough Tor Consols, Callington, who has recently inspected the mine.

IMPORTANT SALE of a valuable 70-inch cylinder ENGINE and MINING MATERIALS, with such INTEREST as the present proprietors may have in the SETTS of WHEAL CURTIS and WHEAL ABRAHAM, situate in the parish of CROWAN, in the county of CORNWALL, which is OFFERED FOR SALE, BY PRIVATE CONTRACT, in consequence of the inability of some large shareholders to advance the calls upon the shares held by them.

The MACHINERY has only recently been purchased, and is most efficient, the shafts newly timbered, and a comparatively small outlay will suffice to open the acknowledged rich ore ground—a more desirable investment is seldom offered to the public. Should the purchaser wish it, several of the present adventurers will readily unite with him in working the mine effectually.

Tenders for the entire mine, or for the engine and machinery alone, will be received (prepaid) by Mr. George A. Jacob, Basinghall-chambers, Basinghall-street, London, until the 30th day of October instant.

For viewing the mine and machinery, application to be made to Mr. G. A. Jacobs, as above; Messrs Hodge and Hockins, solicitors, Truro; or Mr. J. G. Plomer, solicitor, Helston.—The proprietors will not be bound to accept the highest tender.

Basinghall-chambers, Basinghall-street, London, October 12, 1848.

FOR SALE, BY PRIVATE CONTRACT, a capital 40-inch cylinder STEAM-ENGINE, made by West, nearly new, and in perfect condition, with 10-ton boiler.

An excellent 38-inch cylinder STEAM-ENGINE, in good condition, with 8-ton boiler.

Also, a CAPSTAN, with oak axle.

120 fathoms of 11-inch capstan-rope, shears, balance-bob, and horse-whim.

For further particulars, apply to Mr. James Wolferstan, Beeralstone, Devon.

SECRETARY AND MANAGER WANTED.—The Governor, Deputy-Governor, and Court of Assistants of the MINES ROYAL COPPER COMPANY give notice, that in consequence of the RETIREMENT of their SECRETARY and MANAGER, they are prepared to ELECT a GENTLEMAN to FILL the VACANCY. It is essential that any candidate for the appointment should be of active business habits, have a facility in correspondence, a complete acquaintance with accounts and office routine, and be possessed generally of an accurate knowledge of mercantile affairs, more especially of the copper trade. A liberal salary will be allowed. Security will be required. Written applications, with testimonials, must be sent on or before the 7th day of November next, addressed "To the Governor" (marked private), Mines Royal Copper Company, Dowgate.

WANTED, a PARTNER, in a FIRST-RATE COLLIERY, in SOUTH WALES, who can command a capital of from £2000 to £3000.—To any respectable party having the required amount—none other need apply—the present opportunity will be found to offer advantages seldom to be met with.—For particulars apply, with real name and address, to No. 10, Post-office, Newport, Monmouthshire.

ASSAYING, REFINING, &c.—A PERSON, 25 years agent to a large smelting firm, who perfectly understands assaying, refining, general business, and accounts, would be glad to be EMPLOYED in any MINING, REFINING, or OTHER ESTABLISHMENT, at home or abroad; or to be JOINED by a YOUNG MAN, with about £60 or £100, to ESTABLISH an ASSAY OFFICE, &c., in LONDON.

Apply (by letter) to "Y.," 102, Compton-passage, Clerkenwell.

ASSAYING AND ANALYSIS.—Mr. MITCHELL begs to inform the MANAGERS, &c., of MINES, SMELTING-WORKS, and MANUFACTORIES, that he still continues to CONDUCT ASSAYS and ANALYSES of all PRODUCTS, metallurgical and manufacturing, at his LABORATORY,

23, *HAWLEY-ROAD, KENTISH TOWN, LONDON,*

to which address communications are to be forwarded.—Instruction in all branches of assaying and analysis as usual.

NOTICE TO GAS COMPANIES.—J. B. STEARS, ENGINEER, after many years practice in the CONSTRUCTION and MANAGEMENT of GAS-WORKS in the United Kingdom, as well as on the continent, having so far improved the mode of construction and management of these works, as to render them a source of certain gain; and aware that there exists in England a number of small works, which, although useful to the localities in which they are established, produce little or no profits to the proprietors,—J. B. S. proposes to such companies to FARM their WORKS, for a stipulated number of years, at a fixed annual sum, generally considerably more than the proprietary now actually receive, and at the same time releasing them from all the trouble of administration, whilst his plan will ensure to the consumers pure and brilliant gas.

For further particulars, apply to J. B. Stears, proprietor of the Gas-Works at Saumur, Maine et Loire, France.

HENGISTBURY IRON MINE.—Mr. J. E. HOLLOWAY begs to INFORM the IRONMASTERS of WALES and the NORTHERN COUNTIES, that, in consequence of the great demand for his SUPERIOR ORE, he has formed a RAILWAY, and made other arrangements, whereby he is enabled to execute ORDERS with GREATER FACILITY than heretofore, and at the low price of 9s. 6d. per ton of 22½ cwts., which includes the freight. The Hengistbury iron ore yields 33½ per cent.; it is raised from the shore, and is, in consequence, particularly clean. It melts at a low degree of heat, works very mild, gives out lime, and the metal runs from the furnace as freely as water. In every instance it has received unqualified approbation.

Christchurch, Hants, Oct. 16, 1848.

STEAM-ENGINE.—TO BE SOLD, a HIGH-PRESSURE STEAM-ENGINE, 18-horse power—adapted for winding and pumping—18 inches cylinder, 3 feet stroke; fly-wheel, 15 feet diameter, with valves, &c.—made by one of the first engine-makers in England.

Further particulars may be obtained, and the engine seen, by application to John Graham, Rushes Colliery, near Carlow, or Tolerton, in the Queen's County; of William Brophy, Esq., solicitor, Commercial-buildings, Dublin; or of Joseph Hedley, Esq., C.E., 29, Bucklersbury, London.

COAL.—TO BE SOLD, OR LET, a valuable COAL MINE, the property of Sir Thomas G. Hesketh, Bart., situate about five miles from the important manufacturing town of BLACKBURN, in the township of Great Harwood, in the county of Lancaster. The mine has been recently proved, and found, at 77 yards from the surface, to be 5 feet in thickness, and of excellent quality. It is commonly called, or known by the name of, the UPPER MOUNTAIN MINE, and extends over about 1000 statute acres, which will be divided into suitable lots.

A section of the borings may be seen by applying to Mr. Boosie, Rufford Hall, Ormskirk; or to Mr. Whittle, coal viewer, Charnock Richard, Chorley—to either of whom proposals may be sent.

GLAMORGANSHIRE.—TO BE SOLD, BY PRIVATE CONTRACT, with immediate possession, the MORRISTON FOUNDRY, and the PLANT, MACHINERY, and TENANTS' FIXTURES, and MANAGER'S HOUSE, GARDEN, and about FIVE ACRES of LAND, belonging thereto—situate about three miles from SWANSEA, on the Swansea Canal, and within a mile of the lines of the South Wales and Swansea Valley Railways, which are now in course of construction.

The WORKSHOPS are commodious, and well started with all requisite machinery, &c., for immediately resuming business, and the premises are admirably adapted for the manufacture of railway engines and carriages.

For further particulars, and to treat, apply to Messrs. Llewellyn and Randall, solicitors, Neath; Mr. W. P. Struvé, C.E., Swansea; or Mr. Robert Clover, Manchester.

PEMBROKESHIRE.—STEAM-ENGINES, PUMPS, AND WAGGONS.—FOR SALE, BY PRIVATE CONTRACT, 1 40-inch cylinder, double acting, CONDENSING ENGINE, with two boilers (about 6 tons each), 54 fms. of pumps, 12-inch plunger-pole and case, working barrel, and clackpieces; also pump-rods, capstan, shear legs, and all necessary fittings to make the lift complete; 1 20-inch WINDING-ENGINE, with boiler, two drum-barrels, 300 to 350 fathoms of chain, and pit pulleys, friction rollers, &c.; also 12 IRON, and 4 WOODEN, RAILWAY WAGGONS, calculated to carry upwards of 30 cwts. each.

The engines are situated at the Broadmoor Colliery, within four miles of the Saundersfoot Harbour, and are fit for immediate use; and, never having been worked to their full power, are in excellent condition, and are only now offered for sale in consequence of the working being discontinued.

Apply to Messrs. Lewis and James Wilson, Cresswell, near Cresselly, Pembrokeshire.

TO CANAL PROPRIETORS, AGRICULTURISTS, AND COLONISTS.—FOR SALE, a LOCOMOTIVE TUBULAR ENGINE, with double cylinders, with PATENT GEARING, for working a continuous line of wire-rope for canal haulage and ploughing, and fitted for thrashing, pumping, mill-work, &c.—one of a pair. Can be seen at work at Mr. Tyler's farm, half-a-mile north of the Stratford Station, Eastern Counties line.—Apply to Mr. John T. Osborn, 10, King-street, St. James's; or to Messrs A. Deacon and Co., Adam's-court, Old Broad-street, City.

WHEAL WALTER MINING COMPANY

4, *King-street, Cheapside, London, Oct.* 18, 1848.

At a Meeting of shareholders, held at No. 4, King-street, Cheapside, on Wednesday, the 18th inst. (adjourned from the 27th September last),

HENRY SMITH, Esq., in the chair,

It was moved by Henry Smith, Esq., and seconded by J. J. Hays, Esq.—

That the minutes of last meeting be confirmed.

Mr. Walter Weekes not attending personally, and no further accounts being presented,

It was moved by J. D. Poole, Esq., seconded by W. Snell, Esq.—

That the purser, Mr. Walter Weekes, has not produced the amended accounts, which he promised three weeks ago.

Moved by J. J. Hays, Esq., seconded by A. Hays, Esq.—

That the purser be requested to produce the pay-book, and all papers and documents connected with the above mine to the following committee, for the purpose of correcting his balance-sheet.

Moved by J. D. Poole, Esq., and seconded by J. J. Hays, Esq.—

That the following adventurers form the committee to receive the above documents:—J. D. Poole, Esq., H. Smith, Esq., and W. Snell, Esq.

Moved by J. J. Hays, Esq., and seconded by H. Smith, Esq.—

That H. English, Esq., be authorised to act for Mr. Walter Weekes, the purser, in case Mr. Weekes does not attend, and that the books be sent to Mr. English immediately.

Moved by H. Smith, Esq., and seconded by J. D. Poole, Esq.—

That this meeting stand adjourned to this day fortnight (1st Nov.), to be held at the same place.

JAMES CROFTS, Honorary Secretary.

PATENT GALVANISED IRON AND WIRE ROPE WORKS

MILLWALL, POPLAR.

ANDREW SMITH begs to inform the Mining, Railway, and Shipping interests, that he has obtained a PATENT for an IMPROVED METHOD of GALVANISING IRON, producing a much superior article at a considerable saving in cost—the improved process for galvanising wire rope, adding only £10 per ton instead of £20, under the ordinary processes. The rope is extensively used in damp situations, for mining and railway purposes, and for ships' standing rigging.

PATENTEES AND OTHERS REQUIRING ADVERTISEMENTS in the PROVINCIAL or LONDON PAPERS, &c., will MEET PUNCTUAL ATTENTION through the AGENCY of S. DEACON, 21, WALBROOK, where all the papers are filed from every country, and the *Times*, with other London newspapers, for upwards of 100 years past. Any of the provincial papers, as they arrive, may be seen at S. Deacon's Coffee-house, No. 3, Walbrook, on taking refreshment; also, the *Mining Journal, Patent Journal, Mechanics' Magazine*, &c.

MINING IN AUSTRALIA.—A GENTLEMAN, who has resided many years in Australia, and has had some years experience in mining, OFFERS his SERVICES to a COMPANY in EXPLORING an UNINHABITED TRACT of COUNTRY in that COLONY, of immense area, abounding in MINERAL, and distant only 140 miles from coal, to which there is access by water. The Advertiser feels confident, from his own observations, to be able to show that results of immense value will be realised by the first explorers of this region.

Communications addressed (pre-paid), in the first instance, to "M. W. S.," at the office of the *Mining Journal*, 26, Fleet-street, London.—Oct. 17, 1848.

MINERAL PROPERTIES AND ESTATES.—Mr. HENRY ENGLISH begs to intimate to the PROPRIETORS of MINES and MINERAL PROPERTIES, as also to ADVENTURERS in MINES, that REPORTS and SURVEYS, with PLANS and SECTIONS, illustrative thereof, will be FURNISHED by him, being aided by agents in the various mining localities, of undoubted practical knowledge and experience. Information or advice rendered on all points touching mining pursuits, which Mr. H. English feels himself competent to afford, as the result of his personal investigation and inquiries during several years of his connection with the several mining districts.—Estimates given for exploring or proving mining ground, as also the machinery requisite, with drawings.

OFFICES—No. 26, FLEET-STREET, LONDON.

MINING INVESTMENT.—Mr. R. THOMAS, of No. 8 GEORGE-YARD, LOMBARD-STREET, LONDON (who has had upwards of 20 years' experience as a mining agent in London), having made arrangements to resume PURCHASING and SELLING MINE and OTHER SHARES ON COMMISSION, begs to OFFER his SERVICES to his FRIENDS, CAPITALISTS, and OTHERS, in the TRANSACTION of such BUSINESS. The unprecedented low price of mine shares renders the present a most favourable period for investment, with the prospect of large returns.—The fullest information (without charge) will be given relative to mining operations and investments; and a survey, or inspection, if required, of any mining property will be made by a competent party, on moderate terms.

VALUABLE AND SAFE INVESTMENTS.—Mr. H. B. RYE invites the attention of his friends and the public generally to the following MINING INVESTMENTS, and will be pleased to give every LOCAL and OTHER INFORMATION respecting them, on personal application, or by letter (post-paid), at his office, 77, OLD BROAD-STREET, CITY:—

Mines.	No. of Shares.	Nominal price per share.	Dividend p. share per annum at lowest estimate.
East Wheal Rose	128	£750	£300
Wheal Seton	99	650	90
North Pool	100	450	90
South Wheal Francis	124	215	30
Wheal Margaret	112	200	30
Devon Great Consols	1024	209	30
South Wheal Basset	128	125	30
Treviskey and Barrier	130	85	18
Trehane	256	23	6

MINING OFFICES—Established Five Years.—THOMAS P. THOMAS begs to inform his friends and the public, that he has REMOVED from No. 18, Threadneedle-street, to No. 3, GEORGE-YARD, LOMBARD-STREET, LONDON (late Messrs. Phillips and Tiplady's).

N.B.—Dealer in English and Foreign Funds, Mining, Railway, Gas, and other shares.

MR. R. TREDINNICK, THREE KING'S COURT, *LOMBARD-STREET, LONDON,*

Continues to DEAL in every description of MINING, RAILWAY, BANKING, INSURANCE, CANAL, and OTHER SHARES.—Statistical information afforded gratuitously upon personal application.—MONEY ADVANCED upon the above securities.

MR. C. S. RICHARDSON, CIVIL ENGINEER, LAND AND MINING SURVEYOR,

5, *WHITEFRIARS-STREET, LONDON.*

JAMES LANE, MINING SHARE DEALER,

80, *OLD BROAD-STREET, LONDON.*

WILSON & FRASER, 2, WELLINGTON-BUILDINGS, LIVERPOOL, and 13, EXCHANGE-PLACE, GLASGOW, have always ON SALE PIG-IRON, BAR-IRON, RAILWAY CHAIRS, and RAILWAY BARS.

MONEY.—MESSRS. KILLICK & CO. (late Winstanley, Killick, & Co.), SHAREBROKERS, inform their friends and the public, they make IMMEDIATE ADVANCES, to any amount, on the deposit of English and Foreign Railway Shares, Scrip, and Debentures, upon exceedingly advantageous terms: they also BUY and SELL every description of STOCK and MINING SHARES, at much less commission than usually charged.—6, Bank Chambers, opposite Bank of England.

GALVANISED IRON COMPANY'S DISSOLUTION ACT, 1848.—Notice is hereby given, that the FIRST GENERAL MEETING of the shareholders of this company, under the provisions of the Galvanised Iron Company's Dissolution Act, 1848, and the usual Half-yearly General Meeting of the shareholders in this company, according to the provisions of the Deed of Settlement, will be HELD at the London Tavern, Bishopsgate-street, on Wednesday, the 25th inst., at One o'clock precisely in the afternoon.

By order,

3, Mansion-house-place, London, Oct. 11, 1848. S. VINCENT, Secretary.

LLYNVI IRON COMPANY.—Notice is hereby given, that a GENERAL MEETING of the shareholders of this company will be HELD at 21 Moorgate-street, on Wednesday, the 25th inst., at One o'clock precisely, for the purpose of receiving the accounts for the six months ending 30th June last, for the election of auditors for the ensuing year, and for other purposes. By order of the board,

London, Oct. 14, 1848. F. W. GIBBON, Secretary.

NISTER DALE IRON COMPANY.—Notice is hereby given, that an EXTRAORDINARY GENERAL MEETING of the proprietors of shares in this company will be HELD at the office of the company, No. 10, Old Jewry Chambers, in the city of London, on Wednesday, the 25th day of October inst., at One o'clock in the afternoon precisely, for the purpose of sanctioning and adopting the resolutions passed at the extraordinary general meeting of shareholders of the said company, held on the 26th day of June last, and of considering the propriety of dissolving the said company, and of winding up the affairs thereof, and for other general purposes relating to the affairs of the said company.—Oct. 9, 1848. F. W. EMERSON, Clerk.

NATIONAL BRAZILIAN MINING ASSOCIATION, 26, Throgmorton-street, Oct. 16, 1848.—UNMARKED SHARES.—The directors declare, that all the UNMARKED SHARES of this association, upon which the INSTALMENTS have NOT BEEN PAID, are FORFEITED, by the abandonment of the holders.

By order, JOHN KEMPSTON, Jun., Secretary.

[From the *London Gazette*, Tuesday, Oct. 17, 1848.]

CASCADE MINING COMPANY.—Notice is hereby given, that, in pursuance of a requisition, duly signed, a SPECIAL GENERAL MEETING of the shareholders will be HELD at the Queen's Arms Tavern, Cheapside, on Monday, the 23d of October inst., at Twelve o'clock precisely, for the election of a purser; and also for considering the expediency of closing the share list, and immediately raising funds for paying off the debt upon the mine and resuming operations.

Oct. 17, 1848. THOS. HENRY TAUNTON, Secretary.

GADAIR MINING COMPANY.—Notice is hereby given, that a SPECIAL GENERAL MEETING of the shareholders will be HELD on Thursday, the 26th October inst., at the Queen's Arms Tavern, Cheapside, at Twelve o'clock precisely.—Oct. 17, 1848. HENRY ENGLISH, Honorary Purser.

PENNANT AND CRAIGWEN CONSOLIDATED LEAD MINING COMPANY.—Notice is hereby given, that the COMPANIES heretofore known as the PENNANT LEAD AND COPPER MINING COMPANY, and the CRAIGWNE LEAD MINES COMPANY, are now AMALGAMATED, under the above denomination.—The Cost-book, under the amalgamation, lies for signature at the offices of the company, 57, Threadneedle-street, where prospectuses, and every information, may be obtained.—Oct. 9, 1848. WILLIAM W. MANSELL, Purser.

PENNANT AND CRAIGWEN CONSOLIDATED LEAD MINING COMPANY.—Notice is hereby given, that the directors are ready to RECEIVE TENDERS for the WORKING, either on tribute or by contract, of a valuable DEPOSIT of IRON PYRITES, wholly free from arsenic, and also of UMBER, of the finest description and colour.—Specimens may be seen at the offices, 57, Threadneedle-street; or at the wharf, 332, High-street, Wapping.

Oct. 9, 1848. WILLIAM W. MANSELL, Purser.

NOTICE IS HEREBY GIVEN, that the OFFICES of the PENNANT LEAD AND COPPER MINING COMPANY—now amalgamated with the Craigwen Lead Mines Company—and also of the TIN VALE MINING COMPANY, are REMOVED to 57, THREADNEEDLE-STREET, CITY, where it is requested all communications may in future be addressed.

Oct. 9, 1848. WILLIAM W. MANSELL, Purser.

TAMAR SILVER-LEAD MINING COMPANY.—Notice is hereby given, that the ANNUAL GENERAL MEETING of the shareholders of this company will be HELD at 44, Finsbury-square, on Thursday, the 26th day of October next, at Two o'clock precisely.—London, Sept. 28, 1848.

PROPOSED REMEDY FOR THE PRESENT DEPRESSION IN RAILWAYS.—A large body of influential railway proprietors at Liverpool and other places are getting up a memorial to the directors of the London and North-Western and Midland Railways, suggestive of the best means of restoring confidence and remedying the present depression. It is being circulated and signed on the Exchange, and strongly urges on the attention of directories the following important points:—That the capital accounts shall be closed as soon as possible; that all outstanding accounts of the legal advisers shall be examined and paid off; that the engineering expenses shall be placed on the most economical footing; that the expenses at present being incurred in enlarging stations be limited, and that no such further expenses be incurred without the sanction of a majority of the shareholders; also that no further engagements, whether contracts for new lines, the bills for which have been sanctioned by Parliament, and contracts for works not let be entered into without such sanction. That the rates of fare and tolls of all kinds, not productive of a fair remuneration to the shareholders for the outlay and risks, be raised at once, and where Parliament has limited the powers of raising such rates and tolls, that application be made next session to enable the directors to raise them to a remunerative scale. That the number of trains be reduced as far as practicable; that the express trains, except one per day at an increased rate of fare, be taken off; and that first, second, and third-class trains be run separately, at a speed in proportion to the amount of fare paid. That the boards of directors be reduced; that one-third retire annually, and that the new directors be proposed by the proprietors, and not chosen by the board.

SOUTH DEVON RAILWAY.—The key-stone of the eastern end of the arch, in the tunnel at Mutley Plain, was fitted in on Saturday last, and the timbers will probably be removed in the course of the present week. The directors, on Thursday, passed a resolution, reducing the salaries of all the men employed on the line. The policemen and porters are to have 14s. a week instead of 15s., and those of a higher grade will be reduced about 20 per cent. A great number of hands have recently been discharged all along the line, and a further reduction in the number of porters, policemen, and clerks is contemplated. The reduction that has been made in the salaries of the officials is in accordance with a suggestion that was made at the last half-yearly meeting. The secretary has issued notices for the sale of 680 tons of atmospheric railway iron pipes, averaging about 8 cwts. each, now lying at Bristol; also for the sale of about 1500 tons Scotch pig-iron, and about 1000 tons of Welsh cold blast iron, deliverable at Bristol and Bridgewater.

CORNWALL RAILWAY.—Mr. William H. Bond, the secretary of the Cornwall Railway, has issued a letter to the shareholders, in which he says:—"The board of directors having had under consideration the propriety, in the present circumstances of the company, of paying the interest in respect of the calls paid up, have, for the present, resolved to suspend the payment thereof." The works on this line, in the neighbourhood of Plymouth, have been entirely suspended for some time past.

RAILWAY PROPERTY—DEPRECIATION AND IMPROVEMENT.

The serious, and even alarming, depreciation in the value of railway property which has for some time past been gradually, but surely, developing itself, more particularly in that of the large and more important companies, is arousing the attention of all parties in the most distant manner connected with the railway interest, and has already produced the publication of many theories to account for the proximate cause, and recommending methods for counteracting the injurious effects, and the re-establishment of confidence. Among these is one by a "Traveller in Many Lands," just published by Effingham Wilson, of the Royal Exchange, under the title of *Railway Rescue*, in which the author takes a bold and somewhat original view of the question, and clearly shows the causes of much of the present discomfiture in railway bodies, deprecates the attempts making to increase dividends by additional fares, and a decrease in the number of the trains, with many other absurd changes in the regulations of the lines which have been continually, and are still, taking place; people will travel as much as possible at their own convenience, and as cheaply as possible, and the consequent result is likely to be increase of horse transit; and it is dangerous to practice on public patience and tempt to new modes of transit, until every means have been resorted to to diminish the expenses of the old. In the investigation into the causes of the enormous expenses in supporting the permanent way of railroads, he shows that it proceeds from a want of all due proportion between the rails and the bodies rolling over them. The periphery of a locomotive weighs 200 lbs. per yard; the rails, 80 lbs.; yet the former is of an arch form, supported by the spokes at intervals of 9 in., while the rails form a straight beam supported at intervals of 3 ft., with joints at every 15 ft. which invariably deflect beneath the passing load, and destroy the continuity of support. For a perfect railway, the rail should be of sufficient vertical depth to resist all deflection, and hard enough to resist lamellation; but to accomplish this it would be perhaps necessary to have recourse to iron, 200 lbs. per yard, of deep vertical section, with a surface of hard steel, 3 in. wide, and ¾ in. in depth; but as the outlay of capital for such a structure would be quite out of all possibility to meet by remunerative returns, it will be necessary to "try back," and if the road cannot be suited to the wheel, the wheel must be suited to the road—for "permanent way" is, at present, a *lucus a non lucendo.* "Permanent *maintenance* of way" is a practical fact, as shareholders' pockets can testify. The author says—"Having the fear of 'no dividends' before your eyes, you must turn to the practical maxim of the Manchester and Liverpool directors of old, gathered from the experience of the road, and keep down your weights. Light horses for the high speeds, brewers' horses for the drays, small trains and frequent, with small station-room, few police and porters, and fewer clerks, a slight increase of drivers and stokers, and a huge decrease of platelayers and a reduction in iron invoices, would do more for your dividends and the public accommodation than the present system of elephantine traction, with a yielding foothold—a power developed and wasted; for it must be obvious that if, after expending millions to secure good gradients, a deflecting rail be laid down, it is equivalent to converting them into bad gradients. In water transit, a steamboat drives a greater or lesser wave of water before her bows; in rail transit, a locomotive drives a wave of rail before her driving-wheels equivalent to ascending a constant incline, and demanding a far greater expenditure of steam-power to surmount it. The difference in the two cases is, that it is impossible wholly to surmount, though we may modify, the difficulty with the steamboat, whereas, in the case of the rail, it is practicable to surmount the difficulty altogether by proportioning the load on the wheel to the strength of the rail." Railways are not developed; they are supposed to be the enemies of canals and highways, and the respective proprietors are constantly imbrued in a spirit of rivalry; while the alteration of trains and raising of fares, whereby numerous men in business are defeated of their object in taking country houses, will gradually drive all such persons away to the old coach roads, where regularity and certainty can be secured by competition. He forcibly alludes to the inconsistency of the present laws regulating railway property, particularly that by which companies are prohibited from building houses contiguous to their lines—a system which might be rendered extremely profitable; once established, the railway would, to an extent, become a secondary consideration, and cheap fares and numerous trains would be an infallible result. Railway companies would soon lay out farms and build factories, and let out power and supply water, and gas, and manure, and open mines and quarries, and teach landed proprietors to go and do likewise, when once this stumbling-block was removed. They contain, dormant, the elements of prosperity far greater than their most sanguine projectors ever dreamed of in their calculation of tolls and fares. He advises directors to impress upon proprietors the desirability of holding on to their shares; let none sell but the absolutely needy, and all others bide the good time which must infallibly come; to regard not market quotations, but look to intrinsic value; and to beseige the Legislature early and late, until justice is done to the railway interest.

The writer observes, and we think with much reason—"We give charters to water companies, and gas companies, and manure companies, and canal companies, and railway companies, and banking companies, and building companies separately, and yet prevent a company from uniting together to work out conjointly all these things urgently for better advantage. Give them but free scope, and, in addition to all these, they will become provision purveyors to the community far more economical than we have yet beheld. The mile linear would come to represent the mile square—the toll trustee would become the landed proprietor—the long-stage proprietor would become the inn-keeper, and the short-stager would grow into a householder. Gas would be made in the original coal-pits, and every spring of pure water would be converted to man's uses. Under such a system all the stations would become market towns and bazaars. The shareholders would be safer for ever, for it would be impossible to have great fluctuations in the value of property so secured."

The author then clearly describes the difference between the speculator in railway shares and the investor, with the calculations and estimates which the latter should invariably make previous to purchasing. The pamphlet contains many very valuable hints; and, as a whole, should be read by every railway shareholder.

SAFETY FUSE FOR INDICATING LOW WATER IN STEAM-BOILERS.—A very ingenious invention, for indicating the lowness of water in steam-boilers, has been lately patented by Mr. A. Stillman, of the Novelty Iron-Works, in New York—trials of which having been made, have proved in every way satisfactory. One or more tubes are passed through the upper surface of the boiler, reaching down to the top of the flues, or fire tubes; they are about 1 in. internal diameter, and fastened securely down by a screw-nut. At the bottom end the orifice is much contracted, so that any fluid entering can easily ascend in the larger portion. On this small orifice is placed a cap of soft metal, fusible at a low temperature, and the tube being screwed tight down, compresses this fusible cap against the top of the flue. Now, as long as this cap remains at 212°, the temperature of the boiling water, it will remain in its place; but, should the supply of water fail, and the surface in the boiler get below the cap, the flue gets red hot, and the fusible metal melting off the small tube, the steam instantly rushes out, and gives notice to the attendant engineer. The boiler is then rectified as to its supply, the pipes stopped with a plug of wood, and the first opportunity, when the steam is down, a new cap is screwed on.

NEW PROPELLER FOR STEAM VESSELS.—A patent has been taken out by Mr. H. Vint, of Colchester, for propelling ships and other vessels by paddle-wheels, inclosed in close chambers, formed by casings and curved guards, the whole of the propelling apparatus being placed out of sight below the water line. About one-half of each paddle, measuring from the axis to the circumference, acts freely on the current of water in which the vessel floats, whilst the remaining parts revolve in a cylindrical chamber, occupied by dead water, the chamber being open only in the under part, but having a valve at the top for the escape of air. The guards which extend along the sides taper off towards both head and stern, and are constructed to present as little resistance as possible in passing through the water. Instead of projecting beyond the sides of the vessel, the patentee proposes, in some cases, to construct the vessel in such manner as to admit of placing the paddle-wheels, either wholly or partially, within the lines of the side of the vessel, a recess being made on each side for this purpose.

RAILWAY COMPENSATION.—The sheriff's jury decided a case in Glasgow, last week, which shows the danger of depending on claims for compensation before a court of law. A Mr. Dixon claimed of the Pollock and Govan Company 10,466*l.* 10*s.*, for a crossing, and the jury decided he was entitled to *nothing!*

DECAY OF STONE.—We regret to say, that the stone-work of the French church, in St. Martin's-le-grand; the New Hall, Lincoln's Inn; and the New Houses of Parliament, is in a state of rapid decomposition. What have the architects and builders been about?—*Trewman's Exeter Flying Post.*

THE NEW RAILWAY BRIDGE ACROSS THE TWEED.

The opening of this stupendous structure, for the convenience of public traffic, cannot but be regarded as an event of the highest importance in the railway world. Whether it is considered in a merely commercial point of view, or regarded as a proof of the advancing skill and science of the age, it is equally calculated to excite our wonder and admiration. Temporary though it is, does it not excite unwonted ideas when we see the work of a few months produce what the continued labour of 20 years, two or three centuries ago, hardly sufficed to realise? Another point which lends an additional interest to the opening of this great bridge, is the fact that it is the last connecting link in that mighty chain of communication extending from the metropolis of the south to that of the north. London and Edinburgh, the capitals of two nations for centuries at enmity, now shake hands with each other. They are now united by a bond of iron which, the longer they flourish, shall render their connection more indissoluble. Not less interesting are the historical associations connected with the situation of the bridge, but upon these we shall not at present enter.

The bridge and viaduct were formally inspected on Tuesday, by Captain Symonds, Government Inspector of Railways. He arrived at the Tweedmouth station, by special train from Newcastle, about half-past two o'clock, accompanied by Mr. Harrison, engineer of the line. Shortly afterwards an engine, with a first and second class carriage attached, containing these gentlemen, Mr. Bruce, resident engineer, several of the railway officials, and some ladies, proceeded at a slow pace from the station along the immense viaduct and the temporary wooden bridge to the North British Railway station, where a large assemblage had been some time waiting in anticipation of Captain Symonds, arrival. On the approach of the train, three hearty cheers were sent forth accompanied by the booming of three pieces of artillery planted about the centre of the bridge, and which were frequently fired in the course of the day. Numberless flags were also hoisted at various parts along the line and the bridge.

The wooden structure, as we stated a few weeks ago, was then completed, only a portion of the adjacent earthen embankment being unfinished. The utmost exertions have since been made, day and night, to complete this part of the line, in order that the bridge might be opened by the time specified in the contract, and it was so far finished on Monday morning, that trains could have passed, a portion of the "ballast" only being required to be filled in. On Tuesday forenoon, about 12 o'clock, a train of 14 trucks, laden with coke, drawn by two engines, proceeded from the Tweedmouth station to that of the North British. It is estimated that the total weight of this train could not have been less than 180 tons. Beyond a very slight vibration, the train went as smoothly as upon the firmest rock. Several trains of the same kind, and one or two goods trains subsequently passed over during the day, and the regular passenger trains commenced running along the bridge on Wednesday morning.

The opinion of competent and disinterested persons skilled in engineering, represent the wooden bridge to be perfectly substantial, and, in fact, as trustworthy, perhaps more so, than any stone structure. The names of the scientific men under whose direction it has been raised are a sufficient guarantee for its security, and will put at rest any fears that might be entertained. The bridge was commenced in the early part of this year, and the quantity of timber employed in its construction amounts to nearly 300,000 cubic feet. It is 39 feet wide at the base, contracting gradually as it ascends to 13 feet in breadth. The bridge itself is 1200 feet long, and the height from the bed of the river 120 feet. Along the bridge is laid a double line of rails, the second line being within those on which the carriages run, and is raised 2 inches above them, which plan is adopted to prevent oscillation, and render their passage safe and smooth. The embankment, extending from the bridge to the station at Tweedmouth, nearly half a mile long, is estimated to contain 1,100,000 tons of earth. But while every exertion has been made to complete the temporary structure within the specified time, the permanent stone bridge which is being erected on one side of the other, has already made considerable progress. This bridge, which it is expected will be finished in July next year, will contain 28 semi-circular arches, 11 of which, we believe, will be required to span the river, are already nearly finished, and form a continuation of the present wooden erection. The whole length of the stone bridge will be 2000 feet, and its extreme height from the foundation to the road-way 134 feet.—*Berwick Warder.*

OPENING OF THE FIRST RAILWAY IN SPAIN.—An experimental trip was made on the 8th inst., on the railway from Barcelona to Mataro, by the directors and their friends. The convoy included about 300 persons. The journey from Barcelona to Mataro was made in an hour, exclusive of stoppages, and the journey back in 50 minutes—the distance is five leagues The *Barcelonese* is very proud of Catalonia being first in Spain to possess a railway. The line was to be opened to the public on the 15th.

THE RAILWAY INTEREST.—As there appears to be a good deal of misapprehension and misstatement afloat with reference to the object of the meetings of the three great railway companies, and their consequent negociations, we have endeavoured to ascertain the real facts, and we have reason to believe that they are as follows:—The distinct object of the conference is not to increase fares or arrange trains, but it is for effecting a complete union of capital of the three great companies—the North-Western, the South-Western, and the Great Western, and the conversion of the three into one great company, under one controlling body, leaving the working details with the respective boards. The delegates consist of five directors from each company, headed by their respective chairmen. They have generally met twice a week at Mr. Glyn's house, adjoining the bank. We understand that some general principles of union have been affirmed, and the details left to the consideration of the solicitors of the respective companies, who will have to consider of the proper notices to Parliament; for, of course, nothing can be done without the consent of the proprietors of all the companies and legislative sanction. We have heard that some obstacles have arisen from the discussion introduced by that vexed question—the broad gauge and narrow gauge interests—but more particularly from the difficulty of ascertaining the relative values of the great interests which it is proposed should be united. We have, however, good reason to hope that these difficulties will be surmounted.—*Morning Chronicle.*

THE RAILWAY SYSTEM SUGGESTED.—A striking suggestion of the extension of railway communication into a system, as connecting lines are now called, will be found in Sir R. Phillips's *Morning Walk from London to Kew*, published in 1813. On reaching the Surrey iron railway, at Wandsworth, Sir Richard records:—"I found renewed delight in witnessing at this place the economy of horse labour on the iron railway; yet a heavy sigh escaped me as I thought of the inconceivable millions which have been spent about Malta, four or five of which might have been the means of extending double lines of iron railway from London to Edinburgh, Glasgow, Holyhead, Milford, Falmouth, Yarmouth, Dover, and Portsmouth! A reward of a single thousand would have supplied coaches and other vehicles, of various degrees of speed, with the best tackle for readily turning out; and we might, ere this, have witnessed our mail coaches running at the rate of 10 miles an hour, drawn by a single horse, or impelled 15 miles an hour by Blenkinsop's steam-engine. Such would have been a legitimate motive for overstepping the income of a nation; and the completion of so great and useful a work would have afforded rational ground for public triumph in general jubilees!" The writer of these penetrative remarks lived until 1840; so that he had the gratification of witnessing a triumph akin to his long-cherished hope.—*Manchester Examiner.*

DEATH OF THOMAS GRAY, THE RAILWAY "PIONEER."—During the last week Thomas Gray, whose friends claim for him the titles of "Author of the railway system" and the railway "Pioneer," died at Exeter, in the 61st year of his age. Though not an engineer, he was contemporary with the late George Stephenson. His name was brought into note by the publication, in 1820, of a work entitled, "Observations on a General Iron Railway, or land steam conveyance, to supersede the necessity of horses in all public vehicles, showing its vast superiority in every respect over all the present pitiful methods of conveyance by turnpike-roads, canals, and coasting traders." At the time Gray's book was written, all that was known of railways was as they then existed in the rude tramways at Newcastle and its collieries, and considerably before the construction of those earliest of our railways, the Stockton and Darlington, and Liverpool and Manchester. The gist of Gray's suggestion was to carry out a comprehensive railway at one stride over the whole United Kingdom; in fact, to make a simultaneous system to all the principal towns, instead of making the work a labour of section and degree. The progress of the railway system, however, proved that this was impracticable in many, but more especially in monetary points of view, and the suggestion, from its very comprehensiveness, perished. In 1825 he petitioned Parliament and Sir R. Peel, but received no encouragement. Latterly he was reduced to poverty, and sold glass on commission. Appeals were made to the railway world on his behalf, but they met with no response, and it is said that he died broken-hearted.

GEOLOGICAL DISCOVERY.—A correspondent of the *Fife Herald* states that "a section of limestone rock has been lately laid open by the cutting of the Edinburgh and Northern Railway, at the Newburgh station, which belongs to the Cornstone of the old red sandstone formation. The face exposed is about 100 feet in length, by upwards of 20 feet in thickness, and very distinctly stratified. The beds are broken near the centre, which causes their edges to slip down and dip in opposite directions, inclining on one side at an angle of 28° towards the north-east, and on the other approaching to nearly a vertical position towards the north-west. What adds to the geological importance of the discovery, is the fact of the gray sandsone, or Carmylie fossiliferous pavement stone, being found in the immediate vicinity of the calcareous deposit. The representative of the Cornstone in England, it is well known, is extremely rich in fossils, particularly of the genus Cephalaspis, while not a fragment has as yet been detected in any of its numerous localities in Scotland. The colour of the limestone is that of a dark flinty gray, with innumerable white thread-like veins of carbonate of lime, both vertical and longitudinal, and which cause the rock to split up into thin bands of larger and smaller rhomboidal masses. The deposit is subcrystalline, of an extremely hard and cherty textiute; it is not nodular or compound, as in so many other places, but of a close, uniform, homogeneous structure."

MADIGAN AND HADDAN'S PATENT RAILWAY WHEELS.

[Patentee, Richard Madigan, of Haverstock Hill, C.E., and John Cope Haddan, of Lincoln's Inn-fields, C.E. Patent dated April 15, 1848. Specification enrolled Oct. 14, 1848.]

The improvement of Messrs. Madigan and Haddan relate to three kinds of wheels—to those formed from discs of wrought-iron—to those constructed with wrought-iron spokes and naves—and to such as are manufactured of wrought and cast-iron, or of cast-iron alone.

THE WROUGHT-IRON DISC WHEELS.—1. The patentees state, that they prefer to employ sheets of wrought-iron in which the grain of the metal does not run all in one direction, but rapidly from the centre of the disc, in order to diminish the risk of breakage, and that they effect this object by piling, or faggoting, the metal of which the sheet is composed, crosswise, and rolling it in different directions, until it is of the desired thickness. From this sheet of wrought-iron they punch or cut out a circular disc of larger diameter than the intended wheel, sufficient to allow of the formation of a rim, or felloe, to support the tire.

2. To bend the circumference of this disc at right angles, so as to form the felloe, the patentees subject the heated disc to the action of a series of suitably formed dies, after which the tire is attached to the felloe by shrinking, bolting, and riveting in the ordinary manner.

3. Or they forge, upset, or otherwise thicken, the circumference of the disc to form the felloe.

4. Or, they fit the circumference of the disc into and against a ribbed tire or between a double-ribbed tire, after the manner patented by George Cottam, December 5, 1837.* The disc may in this case be straight or curved, or bent at an angle, and the tire made to correspond, so that the two may fit exactly The tire and felloe are then welded and riveted together in the ordinary manner

5. The nave is formed by making the disc, in the first instance, of the thickness of the nave, and then diminishing the whole of it in thickness by hammering, except the central part, which is to form the nave; or they form a recess in the centre of the disc on one side, which produces a corresponding projection on the other side, and weld on bosses to form the nave—one into the recess, and the other to the projection. A third method given for forming the nave, consists in boring a hole in the wrought-iron disc, of larger diameter than that which is to serve for the axle, and cutting the disc radially for a short distance, then bending these radial portions of the disc in alternate directions, and, finally, casting the nave thereon in suitable moulds. It is also proposed to cast the nave upon one or both sides of the uncut disc, and to employ Perlbach's patent method of producing a perfect union between the surfaces of the wrought and cast-iron.†

WHEELS WITH WROUGHT-IRON SPOKES AND NAVES.—1. The spokes are proposed to be welded alternately—first to one side of the wrought-iron nave and then to the other, and afterwards welded to the T-pieces, which form the inner rim, or felloe, for the support of the tire; these pieces being first bent into an arc of a circle. These spokes may also be of an L form, or double L form, and welded to the nave and together, so as to form also the felloe, as in the case of the T spoke.

2. Holes are to be cut in the nave, into which the spokes are welded, or the nave is to be formed of pieces of sheet-iron, and these welded to the inner ends of the spokes.

3. The spokes, nave, and felloe, are to be formed out of rolled bar-iron of the L or double L form. In this case, the bars are first rolled out straight with projections at their ends, and bent into the angular form, when, on being arranged radially, the inner ends of the bars, with the projections thereon, form the nave, and the remaining portions of the bars, the spokes, and inner rim, or felloe. The parts forming the nave are afterwards welded together, and, in some cases, a boss is welded on to one or both sides of the nave.‡

4. The felloes of any of these wheels may be welded, united, or bolted, or otherwise secured to a ribbed, or double-ribbed tire.

WROUGHT-IRON ARM OR CAST-IRON WHEELS.—1. The cast-iron is proposed to be upon a disc in portable moulds, and Perlbach's process to be employed to produce a union between the two metals. The tire is to be afterwards put on after the ordinary manner.

2. The body of the wheel is to be formed of cast-iron entirely, by running the iron into the space encircled by the tire, and causing it to adhere to the inside surface thereof.—*Mechanics' Magazine.*

FORSYTH'S PATENT RAILWAY WHEELS.

[Patentee, T. Forsyth, New North-road, engineer. Patent dated April 14, 1848. Specification enrolled Oct. 14, 1848.]

Mr. Forsyth's improvements in the manufacture of railway wheels consist in rolling them, by suitable machinery, out of circular discs of wrought-iron, containing the requisite quantity of metal, but of half the diameter and double the thickness of the intended wheel; or, of rolling them out of thin circular discs of wrought-iron, to which curved pieces of wrought-iron have been welded, in order to obtain the required degree of thickness at the felloe and nave portions of the wheel. In the latter case the circular disc of wrought-iron is of nearly the same diameter as that of the intended wheel.

The discs of wrought-iron are first heated in furnaces near which the rolling machine is placed, and into which they are successively lifted by cranes. This machine consists of a framework which carries a vertical spindle passing through the centre, and thereby supporting the disc. Opposite to, and at a convenient distance from, that portion of the framework carrying the spindle, is an upright shaft which gives rotary motion to two axles, mounted one above another, and inclined, the top one downwards, and the lower one upwards, so that the rolling cones which they carry at their other extremities are in close proximity. The purpose of these cones, between which part of the circular disc is caused to pass, is to roll that portion of the wheel which is between the felloe and the nave, and the distance between them may be regulated at pleasure by means of a toothed pinion and rack. Behind the verticle spindle are attached to the framework which carries it two axles, which are inclined towards one another, and furnished with rolling cones of smaller size than the other two, and placed one above the other, below the nave of the wheel. The office of these smaller cones is to make the nave surfaces of the disc smooth and uniform. Around the disc, and fixed in the framework are placed, at convenient distances therefrom, several guide pullies, having indentations in their peripheries which serve to give the desired form to the tire and flange of the wheel. The pressure of these guide pulleys against the edge of the disc, or tire and flange of the wheel, is regulated by hand wheels.—*Ibid.*

ADVOCACY OF JEWISH FREEDOM.—Mr. William Thornborrow, whose persevering exertions in the cause of civil and religious liberty secured the election of Mr. Alexander Raphael and Mr. David Salomons as sheriffs of the City of London, in which they were severally successful, has just published a pamphlet, giving an entire history of the difficulties their supporters had to encounter, and the opposition to be overcome. These details are in the form of an address to the members of the Jewish persuasion, his object being to make known to the antipodes the liberal spirit of the City of London, believing that it requires only British feeling to be wafted to the remotest corners of the civilized world, to awaken emulation, and to ensure a favourable consideration of that friendship amongst men, which is of such vast importance to so large a body of their fellowmen as the Jews. The pamphlet is amusing and instructive, giving a convincing proof of what perseverance will effect, even in the most desperate and unhoped-for cases; and Mr. William Thornborrow is eminently entitled to the thanks of the entire body of the Hebrew tribe. Nor have they been ungrateful; a number of influential Jews having expressed their anxiety to award a lasting testimonial of esteem and gratitude to their advocate, a preliminary meeting was held on the 28th of August last, when a committee was formed, for the purpose of printing his address, and to receive subscriptions for a testimonial, commensurate with his untiring zeal and his successful labours in behalf of Jewish freedom. Mr. Thornborrow has communicated to them his intention to apply the proceeds arising from the Jewish subscription to the establishment of an asylum for the reception of "idiots and lunatics of all denominations," founded on a principle differing from any hitherto erected in this country.

STAMMERING AND DEFECTS OF SPEECH.—Those persons—and there are, unfortunately, many of both sexes, and in all ranks of life—who are afflicted with stammering and defective enunciation of the voice, will be gratified by the intelligence, that a method of removing this impediment is practised by Mr. Hunt, of Regent-street, which, without the use of the knife, or the torture of surgical operations, is perfectly efficacious; and adapted to every case in which there is no organic, or positive, defect of conformation. Cases requiring an operation are exceedingly rare, and most fatal consequences have, in too many instances, been produced by an indiscriminate use of instruments. The gentleman above named has adapted the results of a long experience, extensive practice, and matured judgment, to the removal of the defects under which so many labour, and he has discovered a means, simple yet certain, of affording relief. There is no quackery, no ostentation, and no mystery in his method. It has been appreciated by hundreds, and deserves to be appreciated by hundreds more.

* Mr. Cottam's patent, dated Dec. 5, 1837, was "for improvements in the construction of wheels for railway and other carriages." His invention consists in a mode of affixing the iron spokes to their rims, or felloes, by welding their outer ends to a flange, or between flanges, previously formed on the inner periphery of the felloe. After this, the tire is shrunk on as usual. The patentee also describes, but does not claim, an apparatus for welding these wheels.

† For specification of Perlbach's invention, see *Mining Journal*, Jan. 29, 1848.

‡ This method is identical with that described under the 1st, 2d, 3d, and 4th heads of Mr. Henson's specification; but as both patents are dated on the same day, the right of Messrs. Madigan and Haddan to the invention is just as good as Mr. Henson's, and Mr. Henson's as good as theirs. The patent laws have made no provision for a case of conflicting title like this; and yet it is by no means one of rare occurrence.

ON THE MINES OF CINNABAR, UPPER CALIFORNIA.

The mine of New Almaden is situated a few miles from the coast, about midway between San Francisco and Monterey, and in one of the ridges of Sierra Azul Mountain. The mouth of the mine is a few yards down from the summit of the highest hill that has yet been found to contain quicksilver, and is about 1200 ft. above the neighbouring plain, and not much more above the ocean. This hill extends longitudinally in a north-westerly direction, decreasing in height; and in various parts of it, for several miles, traces of the ore have been found, and some openings have been made which promise to be valuable. This range of hills consists of a variety of rocks, which I have not yet had an opportunity properly to study. The prevailing one is a greenish talcose rock, which seems to embrace the bed of ore at the New Almaden Mine, both above and below. The ore is interspersed through a yellow ochreous matrix, which forms a bed 42 ft. in thickness, dipping north-westerly, at an angle of about 45°. The richest ore is at present found in the upper part of the bed, the poorer ores being taken from the lower portion.

This mine, known to the aborigines from time immemorial as a cave of red earth, from which they obtain paint for their bodies, was first discovered to contain quicksilver about four years since, during experiments made by some Mexicans to smelt the ore for the purpose of obtaining gold, which they supposed it to contain. About two years ago it fell into the hands of Barron, Forbes, and Co., who sent on hands, tools, and funds, to commence working it. Unfortunately the vessel fell into the hands of the United States forces, and was confiscated; the operations of the mine were of course delayed till the arrival of Mr. Forbes himself, a few months since, with miners, tools, and whatever things he was able to procure in Mexico, to enable him to make a fair experiment on the capabilities of the mine. The great trouble was to obtain suitable apparatus for extracting the ore. At length four potash kettles were found, which were set in a furnace of adobies, with condensers of mason-work immediately adjacent—a wretched apparatus indeed for managing so subtle a thing as mercurial vapour. While I was at the mine the daily mode of working was to fill these pots in the morning with 1600 lbs. (400 lbs. to each pot) of the ores of average quality, broken in lumps of the size of apples, put on the covers and lute them with a layer of sand. The fires were then kept up till near night, when the furnaces were allowed to cool gradually. The next morning the condensers were opened, and the metal dipped up; which usually amounted to from 200 lbs. to 300 lbs. for the four pots. This was a much less per centage than the assay indicated, and it was obvious that a large portion of metal was lost. The upper parts of the pots and condensers were found to be generally coated with a crust of sulphuret of mercury. Mr. Forbes wished to devise some way of extracting the metal without mixing lime with the ore in the roasting, but was unsuccessful. At length a kiln of lime, which occurs in the immediate vicinity, was burned; and I am informed that, mingled with this, the ore yielded a vastly larger per centage of metal. In the last three weeks about 10,000 lbs. of metal have been extracted with the same apparatus, being a yield of over 50 per cent. Whether the ores were picked or not, I cannot say, but presume they were. Between 15,000 lbs. and 20,000 lbs. have been extracted in about two months—only six miners having been employed in digging the ore, and the hands of the establishment, all told, miners, furnace-men, wood-choppers, &c., numbering only a score. The mine is probably yielding a net profit of $100,000 per annum, with its present crude apparatus. With suitable furnaces and iron cylinders or retorts, the mine would easily yield $1,000,000, and upwards. Mr. Forbes sails to Europe shortly for the necessary apparatus. The bed has as yet been followed but a few hundred feet, but the ores grew more and more rich and abundant.

The other mines opened in the vicinity have not yet been sufficiently developed to decide upon their character. Ore has been found in 15 or 20 other places within a few miles around, and within a few days, in hills that do not seem to belong to the same range with that which contains the mine already described. Some ores of silver have also been recently discovered in this region; but I have had no opportunity of procuring any genuine specimens as yet; and whether silver mines worth the working will be found is, at least, problematical.

There are traces of coal in the country, but nothing of value has yet been discovered. Gold has been found recently on the Sacramento, near Sutter's Fort. It occurs in small masses in the sands of a new mill-race, and is said to promise well.—Rev. C. S. LYMAN: *Chemical Gazette.*

MINES OF GUADALCANAL.—In the *Mining Journal* of the 30th September, we published some interesting particulars respecting these celebrated mines: the following additional information has been received, bearing date Seville, 30th Sept.:—"The English ship sent from Cornwall, with machinery, pumps, and other necessary apparatus for working the silver mines of Guadalcanal, arrived at this port on the 23d, after a rapid and prosperous passage. The arrival excited a good deal of interest, and no doubt is any longer entertained of the reality of the enterprise, or of its prospects of success. The influence of this feeling has enabled the superintending engineer to overcome all the difficulties and delays that the Spanish Government is apt to throw in the way of the introduction of foreign machinery. The vessel had discharged her cargo in three days, and all the tools and machinery were placed on waggons by the contractors, who pledged themselves to have them at the mines in twelve days. Thus, by the 10th or 11th of October, the steam-engine and pumps destined to work the mines of Guadalcanal would be on the spot, and it is hoped that the works will have been commenced early in November."

ANCIENT MINING ON LAKE SUPERIOR.—The last *Lake Superior News* gives a further account of the discovery of evidences of the working of the copper mines of that region by a people now extinct, a notice of which was published some time since. It says the indication which led to the discovery is a sunken trench upon the line of vein, which being drifted into, disclosed a mass of native copper lying in this vein, estimated to weigh about 7 tons. The remains of large timbers were found, by which this had evidently been propped, and beneath it were several cart-loads of ashes and cinders, showing that the miners had endeavoured to reduce the mass by fire. Several of the implements used in the mining operations were found, consisting of stone hammers, a chisel, and a gad of copper. The perfect state of the point of the latter seems to indicate that a process of hardening the metal was known, for the hammer end was most battered. With the copper of this were some large particles of silver. The chisel is ingeniously constructed, so as to admit a handle. No iron instrument was discovered. That the mining operations were conducted to a greater extent than is practised by any existing tribe of Indians is apparent from the fact, that the trench sunk upon the vein extends more than a mile in length. The accumulation of earth in the trench concealed the depth of the workings, except in the small part reopened; but here the depth was found to be 24 ft., and the width 8 ft. Similar trenches exist in the neighbourhood, which were traced for several miles. Not the least interesting part of the discovery is the evidence of the great antiquity of the workings. Large trees were growing upon the earth that had accumulated in the diggings—one of which, directly over the large mass of copper, proved to be 400 years old! Beneath it were trunks of trees that had previously decayed or fallen in, and the whole depth of soil that by the process of time had accumulated upon this antique furnace was 18 ft. This mine is about four miles east of the large mass of copper which was removed from its place some years since, and is now in the National Cabinet at Washington. These mementos of ancient aboriginal industry are deserving of more than a mere passing notice. They may be considered as adding to the proof that, before the discovery of America, a race existed on this continent among whom the arts had reached a higher grade than with the wandering tribes that have succeeded. The Indians now living in this region know nothing of the people by whom, or the time when, these operations were undertaken. They evince a concerted effort which does not now characterise their present feeble efforts in the arts. It is somewhat singular that among a people so observant and persevering, the use of iron remained so wholly unknown, since some of the ores, which exist in vast abundance, and upon the surface, in the Carp River region, are found to be easily reduced to a valuable steel by the heat of a common forge. A knowledge of the use of iron might have changed the destiny of that people, as it may be said to have done that of the race who now triumph, in the pride of art and power, over their almost perished memorials.—*New York Commercial Advertiser.*

ACCIDENTS.

Middleton.—J. Fitton was so severely burned by an explosion of fire-damp at Mr. T. Knowles's Spath Bottoms Colliery, that he died in a few days.

Brierley Hill.—As J. Davis was lowering some furnace cinder upon a waggon with a crane, he loosed the handle of the windlass, which ran round with great violence, flew off, and struck him with great power on the lower part of his abdomen. He staggered and fell to the ground, but recovered himself in a quarter of an hour and walked home, but he died on the following evening.

Swansea.—J. Bowen, while working in Messrs. James and Aubrey's pit, at Cwmllynfell, having undermined a quantity of coal, a "slip" took place, when a mass of coal fell upon him, by which he sustained a compound fracture of the left leg, and great laceration of the abdomen, through which the bowels protruded, from which injuries he died.

Prior's Lee Works, near Shrewsbury.—H. Smith was severely injured by a fall of roof—indeed, he was so bruised and crushed, that while being carried home animation ceased.—Another accident happened, at the same works, to W. Jones, who received such injuries that little hope is entertained of his recovery.

GOLD DEPOSIT IN THE QUEBEC DISTRICT, CANADA.

In the article following will be found some further remarks on the discovery of an immense deposit of gold, extending over an extensive district in the valley of the Sacremento River, in Upper California. The information has been principally gleaned from the American press, which, although proverbial for the most wild exaggerations in such details, has, we have reason to believe, on this occasion, some grounds for the extraordinary statements. However, we can receive, with a greater degree of confidence, the following more moderate announcement of the discovery of gold in Canada—hopes raised on which will, probably, not be subject to the reaction and disappointment which will, doubtless, yet be felt in California:—

"We have received the report of J. Cunningham, Esq., on the mineralogical character of the Seigniory of Rigaud-Vaudreuil, in the district of Quebec, Lower Canada. Mr. Cunningham, we believe, was for some years a resident in one of the southern States, and had an opportunity of examining the gold region to which he refers. In comparing the gold deposits in the Carolinas and Virginia with those of the Seigniory of Rigaud-Vaudreuil, he says:—'I can safely assert that the deposit on your Seigniory will bear comparison with many of the richest deposits of the south. I have examined many of them, and ascertained carefully the results of the washings, and although our operations were conducted upon a very limited scale, being, as it were, simply an essay, I have no doubt, when the mine is regularly opened and a system adopted, that the average proceeds of a year's labour will fully equal those of the Carolinas and Virginia. The gold found is remarkably large and easily collected, and there will, consequently, be no loss by the process of washing. The extent of the deposit is the next important consideration, the limits of which are not yet determined; if the gold exists in the gravel of the country, it will be found where the characteristic formations extend, but if it has originated from some local cause, having an immediate bearing upon the rocks in the vicinity of the stream, the deposit will probably be confined to the country embraced within the drainage of its tributaries. I have found it in variable quantities in the valley of the stream, commencing at its outlet, and ascending two miles; and, although our principal operations were confined to a very small section, I feel confident the same successful results will obtain wherever the deposit is tried in that distance.'

"Traces of a silver mine are also said to have been discovered in the counties of St. Maurice Berthier, and Leinster, north of the St. Lawrence, in the district of Three Rivers and Montreal. A gentleman was engaged in examining them, and there appears to be no doubt that they contain silver ore. The large quantity of copper obtained from Lake Superior this year has been noticed already under this head, and we have the following additional memoranda, indicative of the attention directed to mining pursuits:—The Lake Huron Silver and Copper Mining Company have given notice that all shares on which the instalments or calls made by the company have not been paid, shall be sold by auction on the 18th Oct. Notices are given of application next session for the incorporation of two new mining companies; one to be called the Root River Mining Company, Lake Huron, and the other the Sault Ste. Marie Company."

MINING IN AMERICA—THE NEW EL DORADA.

GOLD.—From California we hear of the discovery of an extensive gold region; a gold-hunting mania is raging through the territory, and everybody is forsaking his ordinary occupation to search for the precious metal. Even the whalers had suspended operations; the captains permitting their seamen to go to the gold country, on condition that every ounce of gold should be sold to themselves for $10. Towns were evacuated, and the two newspapers published in the territory had been suspended, the compositors having gone with the inhabitants to the attractive spot. Mr. Larkin, U.S., navy agent at Monterey, thus writes under date July 1:—"I have visited the 'Placer,' or gold region of California, and found it all it had been represented to me. My anticipations were fully realised. The part I visited was the south fork of the River American, which joins the Sacremento at Sutter's Fort, or two miles from it. This river has its north and south forks, branching more than 20 miles from Fort Sutter. On these two forks there are over 1000 people digging and washing for gold. On Bear Creek and Hulo Creek, branches of Feather River, many are now beginning to work. It is supposed that the banks and bottoms of all these small streams contain vast quantities of gold, and that the valleys between them are rich with the same metal. The people are now working at many places; some are 80 miles from others. The place I visited was about a league in extent, on this were about 50 tents; many have not even this covering. * * * There certainly must this day week be at work on the different Placers several hundreds of Americans and others, who are cleaning 1 oz. of gold a day. I have this week seen in Monterry a Californian, who shows $400 of gold from the labour of one week; much of it was the size of wheat. I myself weighed one piece from his bag, and found the weight an even ounce. Flour at the Placers is scarce, at $16 per 100 lbs. At almost this price it must continue, as people are forsaking their fields. I do not think I am exaggerating in estimating the amount of gold obtained on the rivers I have mentioned at $10,000 a day for the last few days. The working of quicksilver mines, like everything else, is stopped; three-fourths of the houses in the town of San Francisco are shut up. Houses in Monterey are being closed this week; the volunteer companies of Sonoma and San Francisco have lost several men by desertion. Under the present excitement a ship of war, or any other vessel lying at anchor in San Francisco would lose many men. All or nearly all the hotels are shut up. In two weeks Monterey will be nearly without inhabitants.

COPPER.—The sanguine hopes of immediate success and profit which have been indulged in by the speculators in copper mines in Lake Superior, are considerably damped by reports from those regions. During the past year little progress has been made—not for want of encouragement, but of funds. Several locations have been entirely abandoned; the intense pressure for money on the sea-board rendering it impossible for their owners to continue enterprises in which the prospect of return was so remote, while the outlay was so imminent and burthensome. The offering for sale of the mineral lands, at high prices, and only in enormous tracts, has co-operated to precipitate this course in many cases. The companies that are still able to continue their operations are working moderately, or only holding on until they can effect new arrangements, or otherwise increase their resources, while a few are steadily extending this work, and repelling the idea of speculation, are completing their plans and estimates, and perfecting their arrangements. The Cliff Mine is almost the only exception to the general course of things. Its proprietors being men of business and capital, it has been opened with energy and science; it has already shipped 750 tons of native copper this season, and will make it up 1000 tons if navigation continues open until the 1st November. This will give a net profit of not less than $125,000 on the year's business—equal to the entire investment. The copper of these mines is represented as superior in quality to any other; some silver is diffused through it, but the quantity is not sufficient to increase materially the value of the mine, except as it increases the worth of the copper generally. For bells, buttons, or anything repuiring either clearness of tone, or abiding brilliancy of colour, this copper is worth considerably more than the ordinary copper of commerce. These mines promise to be almost inexhaustible; masses of copper of the weight of 10 tons are frequently dislodged, and even a bulk of 50 tons has been known, requiring, of course, to be cut before it can be brought up the shaft. I cannot learn at present what is doing in the copper regions on the Canada side, though it appears at first sight as if British capitalists were strangely careless to the advantages they offer.—Correspondent of *Birmingham Journal*, New York, Sept. 26.

According to the *Preussiche Zeitung*, metallurgical industry has progressed considerably during the preceding year. There were no less, at the end of 1847, than 50 smelting establishments at work, which produced 470,000 quintals of metal, of the value of 2,000,000 Prussian dollars. This quantity, however, is much inferior to the production of the provinces of Silesia, the Rhine, and Westphalia, in which considerable progress has been made during the last year, but the different results have not yet been published.

THE BORROWDALE LEAD MINE.—As it is from the mine of Borrowdale that the principal supply of black lead for pencils is obtained, some description of this mine cannot fail to be interesting. The mine is situated about nine miles from Keswick, near the head of the valley of Borrowdale, on the steep side of a mountain. The entrance to the mine is through a level or adit, which was driven into the hill in 1798, and at the length of 220 yards communicates with an older working. Through this principal level the water passes off, and the produce and rubbish are brought out in small waggons, upon a tramroad or railway. Over the mouth of this adit a house is built, in which the workmen are undressed and searched, as they pass through it on leaving their work; this precaution being deemed necessary from the value of the mineral and the numerous robberies which were formerly committed. The depredations were frequently of so bold a character, that an Act of Parliament was absolutely required. by which "an unlawful entering of any mine, or *wad hole of wad*, or *black cawke*, commonly called black lead," &c. (25 George II., cap. 10), is made felony.—*Art Journal.*

DIED,—On the 14th inst., Captain Caleb Thomas, aged 39 years, manager of South Wheal Frances Mine. He was a man highly respected, and is deeply lamented by a large circle of friends.

PREVENTION OF SMOKE.—A patent has been taken out by Messrs. T. J. Knowles and W. Fullis, for several improved arrangements of fire-grates for domestic purposes, among which is specified a furnace for steam-boilers, for preventing smoke. The fire-box is a shell placed in the centre of the water, and having flues surrounding it, immediately under the fire, communicating its heat, and meeting near the bottom of the boiler, from whence the flue communicates with the chimney. In the lateral and descending flues four transverse bridges are placed, each thickly perforated, through which the heat and flame pass; by that means they become intensely heated, causing any opaque smoke which may arise to become ignited and consumed in its passage to the chimney.

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BY J. Y. WATSON, ESQ., F.G.S.

No. IV.—THE SYSTEM OF CORNISH MINING.

The management of most of the Cornish mines is in the hands of a committee, consisting generally of the largest shareholders in the county, or as they are termed, *in-adventurers*;* but, in the majority of mines, a gentleman chosen from the adventurers, and called the *purser*, has the entire management, keeping the accounts, and paying all moneys. At the meetings of the adventurers, which, under the Cost-book System, ought to be held on the mines *every two months*, the purser presents a statement of the accounts, to be audited. The conducting of mines, on what is termed the "Cost-book Principle," is peculiar to the county of Cornwall, where it has for ages been recognised by the Stannary Courts, and is in itself extremely simple. There has, however, been of late much discussion upon its privileges and powers, and which has tended more to mystify than to explain. All companies for working mines, formed and carried on upon the principle of the cost-book, are especially exempt from the operations of the Joint-Stock Registration Act. The simple principle is this:—On the formation of a company a cost-book is produced; on the first page is given the name of the mine, with a form something like the following:—"We, the undersigned, do hereby consent and agree to become shareholders, adventurers, and partners in the ——— mine, situate in the parish of ———, in the county of ———, in the shares and proportions hereunder, the entirety of the said mine being divided into —— shares, and the mine conducted on the usual Cost-book System." Under this the names of the shareholders are entered, with the number of shares taken by each adventurer, and he signs it opposite his name. The rules and regulations for the government of the company are then made, and entered in like manner. These generally refer to the privileges and powers of the "cost-book," provide for their being carried out, and for the general management of the company. All debts and liabilities incurred in working the mine should be paid every month, and a meeting of shareholders called every two months, to audit the accounts, examine vouchers, &c. If there be debts, a call should be made to pay them off, and to provide money for the next two months' working. If any profits, they should, so far as may appear prudent, be divided. By this arrangement, which is the best feature in the cost-book, every shareholder knows his liability, and can end it at any two-monthly meeting, it being part of the system (and should be provided for in the rules), that at any two-monthly meeting a shareholder may pay his proportion of debts due to that date, and "sign off" his name from the cost-book, as no longer a shareholder, and, consequently, not liable for any debts contracted after his so signing off. For instance, say A B has $\frac{1}{64}$th in Wheal ——, and the debts amount to 640*l.*, he pays his 10*l.* down, signs off, and in 12 months is entitled to his proportion of the value of the materials, machinery, &c., at the time of his signing off. The cost-book should be kept by the purser, who must call meetings, make calls, pay and receive money. It is, however, competent for the shareholders to delegate two or three of their body to act as a finance committee, and in London companies this plan is generally adopted. Under the cost-book, if a party wishes to dispose of all, or any part of his interest, a written notice to the purser, signed by the seller, and accepted by the buyer, subject to the rules and regulations of the cost-book, is sufficient; this is pasted in the book, and constitutes the transfer.

Next to the purser of a mine is the head captain or manager, who superintends the whole of the mine, and the general routine of the surface work; the underground captains seeing that the work is there conducted properly; the persons performing the work in the various parts of the mine may be divided into tributers, tutworkmen, and labourers.

Tributers receive a certain portion of the ore, or so much in the pound (as may be agreed upon), in the value of what they raise. Tutworkmen work by the piece, generally calculated by the fathom; in this way the shafts are sunk, adits and levels driven, and the labour usually performed in those parts of the mine which do not produce ores; the labourers are generally employed on the surface dressing ores, &c. and consist of men, boys, women, and girls. The population engaged in mining in Cornwall has been estimated as follows:—*Copper:* agents, 31; dressers, 266; miners, 13,737; add for unspecified proportion, 3600—estimated total, 18,000. *Tin:* agents, 2; miners, 5836; dressers, 629; labourers, 82; smelters, 34; streamers, 71; testers, 2; unspecified proportion, 1600—estimated total, 8200. *Lead:* dressers, 52; agents, 2; miners, 440; unspecified proportion, 100 — estimated total, 600. Lime dealers, 44; clay-merchants, 9; labourers, 216; iron miners, 85; manganese miners, 69; slate quarriers, 69; unspecified assayers, 43; tin and copper miners, 4044; mixed ore miners, 353; surface miners, 625; ore dressers, 427; smelters, 32; quarrymen, 222—total engaged in mining, exclusive of labourers, 27,422. The dependants on this large number will bring up the total deriving their subsistence from mining to 100,000.

The general features of a mining district have been graphically sketched by a talented writer—"To one unaccustomed to a mining country, the view from Carn Marth, which is a rocky eminence of 757 feet, is full of novelty. Over a surface, neither mountainous nor flat, but diversified from sea to sea by a constant series of low undulating hills and vales, the farmer and the miner seem to be occupying the country in something like the confusion of warfare. The situations of the Consolidated Mines, the United Mines, the Poldice Mine, &c., &c., are marked out by spots a mile in length, by half a mile in breadth, covered with what are termed 'the deads' of the mine—*i. e.*, slaty poisonous rubbish, thrown up in rugged heaps, which, at a distance, give the place the appearance of an encampment of soldiers' tents. This lifeless mass follows the course of the main lode (which, as has been said, generally runs east and west); and from it, in different directions, minor branches of the same barren rubbish diverge through the fertile country, like the streams of lava from a volcano. The miner being obliged to have a shaft for air at every hundred yards, and the Stannary Laws allowing him freely to pursue his game, his hidden path is commonly to be traced by a series of heaps of 'deads,' which rise up among the green fields, and among the grazing cattle, like the workings of a mole. Steam-engines and *whims* (large capstans worked by two or four horses) are scattered about; and in the neighbourhood of the old, as well as of the new, workings are sprinkled, one by one, a number of small whitewashed miners' cottages, which, being neither on a road, nor near a road, wear, to the eye of the stranger, the appearance of having been dropped down *a-propos* to nothing. Such, or not very dissimilar, is in most cases the superficial view of a country, the chief wealth of which is subterraneous. Early in the morning the scene becomes animated. From the scattered cottages, as far as the eye can reach, men, women, and children of all ages begin to creep out; and it is curious to observe them all converging like bees towards the small hole at which they are to enter their mine. On their arrival, the women and children, whose duty it is to dress or clean the ore, repair to the rough sheds under which they work; while the men, having stripped and put on their *underground* clothes (which are coarse flannel dresses), one after another descend the several shafts of the mine, by perpendicular ladders, to their respective levels or galleries†—one of which is 990 feet below the level of the ocean. As soon as they have all disappeared, a most remarkable stillness prevails—scarcely a human being is to be seen. The tall chimneys of the steam-engines emit no smoke; and nothing is in motion but the great 'bobs' or levers of these gigantic machines, which, slowly rising and falling, exert their power, either to lift the water or produce from the mine, or to stamp the ores; and in the tranquility of such a scene, it is curious to call to mind the busy occupations of the hidden thousands who are at work; to contrast the natural verdure of the country with the dead product of the mines; and to observe a few cattle ruminating on the surface of green sunny fields, while man is buried and toiling beneath them in darkness and seclusion. But it is necessary that we should now descend from the heights of Carn Marth, to take a nearer view of the mode of working the mine, and to give a skeleton plan of that simple operation."

A lode, as before stated, is a crack in the rock, bearing, in shape and dimensions, the character of the convulsion that formed it; and it is in this irregular crevice that Nature has, most irregularly, deposited her mineral wealth; for the crack, or lode, is never filled with ore, but that is distributed and scattered in veins and bunches, the rest of the lode being made of quartz, mundic, and "deads." Under such circumstances, it is impossible to say beforehand where the riches of the lode exist; and, therefore, if its general character and appearance seem to authorise the expense, the mine is commenced in the manner before explained.

The object of perpendicular shafts and horizontal galleries is not so much to get at the ores, which are directly procured from them, as to put the lode into a state capable of being worked by a number of men; in short, to convert it into what may now be termed a mine. In the Cornish mines, the sinking of the shafts, and the driving of the levels is paid by what is termed *tutwork*, or task work—that is, so much per fathom; and, in addition to this, the miners receive a small per centage of the ores, in order to induce them to keep these as separate as possible from the *deads*, which they would not do, unless it were thus made their interest. The lode, when divided as above described, is open to the inspection of all the labouring miners in the country; and, by a most admirable system, each mass or compartment is let, by public competition, for two months, to two or four miners, who may work it as they choose. These men undertake to break the ores, wheel them, raise them to the surface, or, as it is termed, *to grass*, and pay for the whole process of dressing the ores, which is bringing them to a state fit for market. The ores are sold every week by public auction, and the miner receives immediately the *tribute*, or per centage, for which he agreed to work, which varies from 6d. to 13s. in 1*l.*, according to the richness, or poverty, of the ores produced. The owners of the mine, or, as they are termed, the *adventurers*, thus avoid the necessity of overlooking the detail of so many operations, and it is evidently the interest of the miner to make them gain as much as possible. Should the *pitch*, or compartment, turn out bad, the miner has a right, at any time, to abandon his bargain, by paying a fine of 20s. At the expiration of the lease, or whenever they may be abandoned, the *pitches* are anew put up to auction, and let for two more months; some may be getting richer, others poorer, as the work proceeds; and thus public competition practically determines, from time to time, the proper produce which the miner should receive. The different rectangular masses, or *pitches*, into which the lode is divided by the galleries and shafts, very seldom turn out to be of similar value; and they are, of course, worked exactly in proportion to their produce. In one compartment the whole of the ore is worked out; in another only a proportion will pay for working; while not a few turn out so poor that no one will undertake to work them at all. The *pitches* are, in most cases, taken by two miners, who relieve each other; and one often sees a father and son, who are in partnership, gradually find the lode turn out poorer and poorer, until they are at last compelled to pay their fine, and quit the ungrateful spot. The lottery in which the *tributers* engage abounds in blanks and prizes. Sometimes the lode gets suddenly rich, sometimes as suddenly poor, and occasionally a productive lode altogether vanishes, or, as the miners say, has *taken a heave*; by which they mean, that some convulsion of Nature has broken the lode, and removed it off—sometimes 200 or 300 ft.—to the right or left. In order to determine where to find it, those well acquainted with the subject carefully observe the facture, or broken extremity of the lode, and, from its appearance, they can determine on which side, and in what direction, to search for the lost prize. Sometimes, again, a lode which is paying very well is, all of a sudden, found to have *taken horse*, which means that it has split into two lodes, separated from each other by an unproductive mass, which the miners term a *horse*; and, although the aggregate of the two lodes frequently contains the same quantity of ore as the original single lode, yet as the expense of working is doubled, it often will not pay to work them; for in all mining operations it must be constantly remembered, that it is not the quantity, or even quality of the ores, that can induce a prudent man to work them, if the *expenses*, from any circumstances, should exceed the *returns*.

There is no light in a mine but that afforded by the candles of the workmen; while the universal presence of water soaking through the crevices of the gallery, and intermixing with the dust and rubbish, keep up a constant succession of dirty puddles, rendering it no very pleasant affair going underground. Each miner has a candle, which is stuck close by him against the wall of his gallery, by means of a piece of clay; and, besides those employed in extending the gallery, there are generally one or two boys wheeling the broken ore, &c., to the shaft. Each boy has a candle affixed to his wheelbarrow, by the universal subterranean candlestick—a piece of clay. The men relieve each other every six or eight hours, and thus keep on their work uninterruptedly, except on Sundays. Notwithstanding this incessant labour, the progress of the miner in excavating his gallery is, in general, very small—1, 2, or 3 ft. in a week, or a few inches daily, is often the whole amount of the united operations of 20 or 30 men. In loose lodes, and in killas districts, they cast more, but the lode is rarely so wide as the gallery, or level, so that it becomes necessary to cut away the solid rock on each side, which is often very hard, even when the lode is soft.

In working by tribute, the miner naturally does all he can to enrich himself, but the system is so admirably balanced and arranged by long practice and experience, that it is very difficult for him to enrich himself, without also enriching the owners or *adventurers*. Still, however, there are modes by which he occasionally endeavours to defraud his employer. The miners will sometimes steal each other's ores. If they come to a very good lode, they will occasionally hide their ore under the rubbish, or *deads*, with the view of making the profit they are getting appear to be inconsiderable, and, of course, being able, at the end of their contract, to take on their *pitch* for another two months at an easy rate. They, perhaps, succeed in this; but when they go to reap the benefit of their fraud, they sometimes find that a brother miner, still more cunning than themselves, has discovered their hidden treasure, and has carried it off. The most usual mode of fraud, however, is a combination between two *tributers*, one of whom is working very rich, and the other very poor ores The tributer who is working poor ores has, perhaps, bargained that he is to receive 13s. out of every 20s. worth of ore; while his friend, who is working the rich ores, is to get only 1s. out of 20. In the dark chambers of the mine these two men secretly agree to exchange some of their ores, and then to divide the gross profits, which are, of course, very large; for, by this arrangement, instead of 1s. they get 13s. out of 20 for a portion of the rich ores, while they lose but a trifle on a corresponding portion of the poor ores. There are a few other methods of defrauding the adventurers; but in the diamond cut diamond system of the Cornish mines a severe check upon all such tricks is established in the appointment of a number of excellent men, who are selected from among the working miners, to superintend all their operations; these men, having been brought up in the mines, are, of course, acquainted with the whole system. They have fixed salaries of about 80*l.* or 90*l.* a year, and are termed *captains of the mines*.

[*To be continued in next week's Mining Journal.*]

BUCKFAST MOOR TIN MINE.—This mine, divided into 1024 shares, and conducted on the Cost-book System, is situate in the parish of Dean, Devonshire, on the borders of Dartmoor, extending east and west, on the course of the lodes, 900 fms., and, from north to south, 600 fms. The prospectus informs us that the present state of the surface gives undeniable evidence of the continuous workings of the ancient tinners, and quantities of stuff are found in their burrows which will pay for dressing. It appears that a company, formed 10 years ago, was broken up, from a disagreement with the agent; then the parties could not obtain a good and valid title, which circumstance suspended all working; it was at length settled that J. B. Yarde Buller, Esq., was the rightful owner, and from him the present promoters of the company have obtained a lease for 14 years, from Midsummer, 1848, at 1-18th dues. The engine-shaft is sunk 14 fms.; an adit level driven on the course of the lode 100 fms.—the lode tinny throughout, and 6 ft. big. It is proposed to sink the shaft to the 20 fm. level, a rich leader of tin having gone down near it. It is then proposed to cross-cut to a north parallel lode in the 10 fm. level, which lode is producing good stones of tin at only 4 fms. from surface. The tin is said to be of excellent quality, and free from all injurious alloy. It is now proposed to dispose of shares at 2*l.* 10s. each, 1*l.* of which is to cover the expenses already incurred, and the remainder to be applied to the full development of the mine, estimated at 1200*l.* Mr. John Kneebone, of Beeralston, reports that there are several tin lodes in the sett, which, in some places, have been opened on to a great extent by the ancient tinners, which, in his opinion, is a proof that they were productive; and he has no doubt, if the researches are extended below those workings, courses of tin will be found more than sufficient to pay for any trouble or expense; and there is a good supply of water running through the sett. Captain James Carpenter, of Wheal Anderton, reports that the lode the former party sunk the deepest shaft on must be large, judging from the size of the stones at surface, the chiefest part of which are impregnated with tin of very superior quality, and a great deal of good work that would pay for stamping, with many rich specimens intermixed, which denotes that the lode had greatly improved in the 10 fms. he was informed had been sunk on it; the stratum is congenial for tin, being a soft granite, very similar to what has been observed where the best courses of tin have been discovered on Dartmoor; and there is no reason why this lode may not be very productive also, if prosecuted with a degree of vigour such indications deserve; or, at least, he considers it to be one above the ordinary speculations for capital to be employed, independent of the side lodes, both north and south, that have also shown a great degree of regularity, and good specimens of tin.

* All those who hold shares in a mine are called "adventurers."

† Recently a vast improvement in the mode of descending deep mines has been accomplished, and is in successful operation at the Tresavean Mine.

Mining Correspondence.

ENGLISH MINES.

BARRISTOWN.—Capt. T. Angove (Oct. 13) reports—The lode in the 16 fm. level end east is about 2 ft. wide, producing about 5 cwts. of lead per fm. The flat-rod shaft is still sinking in broken ground, about 10 fms. under the 16 fm. level. The adit end is in a slide at present, although for the past week we have had a lode in it producing 1 ton of lead per fm. The pitches in the adit level continue to look well.——Oct. 16.—The adit level has got through the slide, and the lode is again very good.

BEDFORD UNITED.—Capt. James Phillips (Oct. 18) reports—At Wheal Marquis, the ground in the engine-shaft continues more favourable for sinking. The lode in the 80 fm. level east is from 2 to 3 ft. wide, producing good saving work; in Tiller's winze, in this level, the lode is 18 in. wide, producing good stones of ore. We are still driving by the side of the lode in the 70 fm. level east; the pitches are turning out well. The produce of the ores sold in February was 9¼, March 11¼, and April 9¼, as made by Harvey; and it was calculated at the time, that they were sold at 8¾, 11¾, and 9½.

COMBLAWN.—Capt. J. Hosking (Oct. 10) reports—Relative to the future workings, &c., at this mine, I beg to say that my predictions respecting the existence of a good lode in the 20 fm. level will be verified about the middle of November. I would not say positively that we shall be in a position to make returns for several months, still I firmly believe that such will be the case, provided that no further increase of water takes place in cutting the main lode in the 20. From Capt. Penaluna's report, I should think that the shareholders would be in good spirits; and from the rich ore which we broke in the bottom of the 15 fm. level, I anticipate favourable results, and shall be greatly disappointed if the lodes are not found as I have before stated—good ones. I have again been surveying the water-course, and I find, that by taking the mills above the mine, we might easily erect a water-wheel, 40 ft. diameter and 3 ft. in breast. Such power as this would enable us to sink 30 fms. below the present bottom (50 fms. below the surface); by watching opportunities, an engine of the above dimensions might be procured at a trifling expense. From the three draught engines at the Callington Mines, and the reservoir at Haye, a sufficient stream of water may be procured, and thus save the expense of a steam-engine for a time. Should the lodes (say in a 50 fm. level) prove productive, as is anticipated, and warrant the erection of a steam-engine, then the proposed wheel might be turned to a great advantage in drawing the stuff, crushing the ore, stamping, &c. Our present engine will, I hope, enable us to see the lodes in the 20, but I fear we shall not be able to sink any deeper with it

CWM ERFIN.—Captain S. Nicholls (Oct. 14) reports—The 20 fm. level is driven 3 fms. west of engine-shaft, in which the lode is still unproductive; but by driving about 3 fms. more, according to the dip of the ore in the 10 fm. level, we shall get into some productive ore ground. The stopes in the 10 fm. level, west of engine-shaft, are much the same as last reported. We have not yet met with any lode in the cross-cut in the 10 fm. level, east of the engine-shaft. The produce of ores in the pitches is pretty much the same as last month.

DEAN PRIOR AND BUCKFASTLEIGH.—Capt. C. Carpenter (Oct. 14) reports—The more I see of the ground we are cross-cutting through in the 40, the better I am pleased; as the heads, or joints, are so much tinctured with the oxide of copper, and mica, or prian, convinces me that we are fast approaching the lode, and, in all probability, one that will soon show its being worth development. I cannot, for a moment, see that we ought to be discouraged from the appearances already presented; on the contrary, the indications presenting themselves, so far as my humble opinion and practice extend, give me the most sanguine expectations of ultimate success in the undertaking. I must add, I never saw the ground so congenial, and possessing such indications for mineral, as at present; this, however, is in some degree to be accounted for by the approximation of the lode. I think we may calculate on three weeks longer to intersect the lode in the 40, without it should make a more perpendicular inclination than in the 30 fm. level.——Capt. H. Choake (Oct. 18) reports—There is no particular alteration in the underground operations, the ground in the cross-cut being just of the same character as I stated in my last report. Driven from the engine-shaft, 7 fms. 5 ft. 6 in. We have 2 fms. more to drive to cut the lode, unless it should vary in its underlie.

DEVON AND COURTENAY.—Capt. N. Seccombe (Oct. 17) reports—In the end driving west, in the 40 fm. level, on the gossan lode, the lode is 2 ft. wide, composed of spar, white iron, and mundic, with some good branches of ore in the lode, the ground is also very favourable for driving. In our end driving east, in the 50 fm. level, on the gossan lode, the lode is 2½ ft. wide, a part of which, about 4 in., forms a leader of good yellow copper ore, the other part is composed of mundic, spar, &c.; the end driving west in this level is suspended for the present.

EAST CROWNDALE.—Capt. S. Paull (Oct. 14) reports—The ground in the 17 fm. level, driving east of Diamond's shaft, on the course of Thomas's lode, continues favourable for driving; the part of the lode we are now carrying is composed of peach, elvan, killas, spar, prian, and mundic, and is of a most kindly description, and bids fair soon to produce tin We have commenced to drive a cross-cut north, in the same level, to intersect the north lode; the ground is speedy to drive in, and I expect less than 5 fms. more will cut the lode. The adit level, driving west, on the course of Thomas's lode, does not look so well as it did when last reported upon, the lode being much more impregnated with mundic and killas; this not being an unusual circumstance as to the character of this lode, I expect it will soon resume its usual appearance; it is, at present worth about 35*l.* per fm.; the stope in the back of this level looks just as it has for some time past, except that the lode increases in size; it is 10 ft. wide, composed of peach, killas, prian, spar, mundic, and tin, worth about 24*l.* per fm. The men hindered in Thomas's shaft through water, have been stoping off a piece of lode left standing in the side of this level, and putting in a stull, which is near being completed. Our engine, pit-work, and stamps are all in good working condition.

EXMOOR WHEAL ELIZA.—Capt. W. H. Whitford (Oct. 18) reports—Nothing is more natural than that the human mind is prone to lose sight of the most important objects, especially under circumstances of peculiar and national depression, like the present; therefore, I feel perfectly justified in calling the attention of the respective shareholders to the prospects which are but just before them; perhaps it would not be deemed superfluous to recapitulate from a former report, that we have three large, and more than ordinarily promising, lodes, within about 15 fms. of each other, from which the most splendid specimens of sulphuret of copper have been taken in the 12 fm. level, and where we know there is a good lode going down. We are now sinking the engine-shaft, and have reason to hope, that in four months from this date, we shall be down 24 fms., at which point we intend to intersect the respective lodes; there is but little doubt but an ample remuneration will be realised by those who hold on their shares. The castings to which I referred in my last have arrived on the mine, and will be set to work with as little delay as possible—I hope in the course of next week, which will greatly facilitate our sinking.

GREAT MICHELL CONSOLS.—Capt. T. Richards (Oct. 18) reports—The lode in the 45 fm. level, west of the sump winze, has a very promising appearance, containing mundic, fluor, capel, and spar, with good stones of ore in places. In the 35 fm. level, west of the sump winze, the lode is without material alteration, containing mundic, capel, and spar, with a small proportion of ore.

HOLMBUSH.—Capt. William Lean (Oct. 17)—The shaftmen are still engaged in fixing a lift in the 132 fm. level. The lode in the 132 fm. level west is 18 inches wide, composed of spar, mundic, and stones of ore. The lode in the 120 fm. level south is 4 ft. wide, composed of quartz and stones of lead—saving work; the lode in the back of this level is producing 4 cwts. of lead per fm. The lode in the 110 fm. level south is 3 ft. wide, composed of quartz and lead, worth 5*l.* per fm.; the lode in the stopes, in the back of this level, is producing saving work. The lode in the 100 fm. level south is 2 feet wide, composed of soft spar, flookan, and stones of lead; the Flap-jack lode, in the same level east, is still in a disordered state, and we are in daily expectation of intersecting the great cross-course. The pitches, on the whole, are producing a fair quantity of lead ores.

KIRKCUDBRIGHTSHIRE.—The agent (Oct. 14) reports—The lode in the 50 end west has increased in size, and is very kindly, but poor for lead, there being only spots and some small strings through it. The caunter lode east of this level is large, with good stones of ore in it, and the ground improving in appearance. Keith's shaft is now down to the 50 fm. level, and the men have commenced driving east and west; the appearance of the lode has much improved this week, and there is a good branch of ore in the bottom of end eastward; the lode westward is also very kindly. The lode in the 40 end, west of Keith's, is 3 ft. wide, with spots of lead, and full of sulphur from wall to wall—a very strong lode. We have still a good branch of ore in the winze under the 40, worth about 5 cwts. to the fm.; the ground is stiff for breaking by the sides, but the lode is soft. The lode in the 30 end east is still poor, it is 3½ ft. wide, with a deal of sulphur and copper in places.

LAMHEROOE WHEAL MARIA.—The agent reports:—The cross-cut east in the 30 fathom level, on Davey's shaft, which was undertaken to prove the south part of the K lode, has been suspended—Capt. Tabb considering that the lode will be fully proved in the 40 fm. level; and the sinking of the shaft to that depth will be accomplished within this month.

LEWIS.—Capt. S. S. Noell (Oct. 14) reports—The lode in the 70 fm. level east is at present small, and disordered by a cross branch; the lode in the 70, west from the sump-shaft, on the south branch, is small and unproductive; in the 70, south-west from the pump whim-shaft, we have intersected a rich floor of tin 1 ft. thick; I expect to extend this level about 4 ft. more, to cut the south branch; it is 1 ft. wide, worth 10*l.* per fm., and much improved since my last. In the 60 west, on the south branch, the lode is 1 ft. wide, worth 5*l.* per fm.; the lode in the 60, east from the copper ore shaft, on Ralph's branch, is 9 in. wide, producing fair quality tinstuff. The lode in the 50 east, on the south branch, is 1 ft. wide, worth 6*l.* per fathom; in the 50 east, on Ralph's

branch, the lode is 1 ft. wide, worth 3*l.* per fm. The lode in the 40 east, on the south branch, is 6 in. wide, worth 2*l.* 10s. per fm.

MENDIP HILLS.—Capt. F. C. Harpur (Oct. 16) reports—The lode in the 38 fm. level, south of shaft, is become rather larger than when I last wrote you, being at present about 2 ft. 6 in. wide, composed principally of flookan, spar, and iron, with slight sprigs of lead near the foot-wall part—ground favourable for driving. In the slag department, we continue to press forward, as fast as possible, with the open cutting towards the eastern, or more productive part of the valley; the beds of stuff at present laying open are without any material alteration, consisting chiefly of slag stuff, some parts of which, particularly that near the bottom of the valley, is tolerable good work.

SOUTH MOLTON CONSOLS.—Capt. W. H. Whitford (Oct. 18) reports—For the satisfaction of the distant shareholders, I beg to say, that our engine-shaft is sunk 12 fms. below the adit, which, deducting the rise of the hill, together with the underlay of the former shaft, will leave our present bottom about 2 fms. under the old workings. Our object of being only 12 ft. below the bottom of the old mine, is not to incur any danger by holing, and yet be sufficiently near to drain it. We commenced our cross-cut towards the lode last Monday night—price given 3*l.* per fm. Should the ground continue as at present, I cannot calculate less than six weeks to cut the lode; but I have very presumptive evidences to anticipate an important change for the better very shortly, as a hard floor, which passed through the shaft, will leave the cross-cut in about 10 or 12 ft. driving. There can be but little doubt, but when the lode is cut, considerable returns will be made. My expectation of something good, is confirmed by the united testimony of those men who were eye witnesses of the rich lode gone down in the adit, just at that point where we intend to intersect it. Our engine continues to work very well; I hope the same observation may be applied to our sampling.

SOUTH WHEAL TRELAWNY.—Capt. W. Jenkin (Oct. 16) reports—We are driving north and south on Sobey's lode in the 30 fm. level. The south end of the cross-cut is 2½ ft. wide, composed of light killas, bright soft spar, can, and spots of copper ore, and also thick with fine lead work, which I intend to save; the lode is almost perpendicular, I call it a very promising one; the lode north of the cross-cut is much the same, it is small and harder, it is just the same strata as last mentioned; the ground in the south end is favourable; water just as usual.

TRELEIGH CONSOLS.—Captain William Symons (Oct. 14) reports—At Garden's shaft, below the 100 fm, level, the lode which has been in the shaft for several fathoms sinking has quite left us to the north; we are now in the country. In the 90, east of Garden's cross-cut north, what I mentioned last week, of cutting the wall of the lode has proved only a branch, 6 in. wide; the lode still to the north. In the 80, west of Garden's, the lode is 10 in. wide, but little ore. In the 70, west of ditto, the lode is 2 ft. wide, with stones of ore, with an improvement in its appearance. In the 50, west of ditto, the lode is 2 ft. wide, with stones of ore, mundic, and jack—more promising. Wheal Parent engine-shaft is sinking in the country; ground much as usual. East on the middle lode, from the adit, the lode is 8 in. wide, no mineral. In the 60, west of Garden's, the lode is 1 ft. wide, but little ore.

TRENANCE.—Captain R. Dalton (Oct. 7) reports—No. 1: The deep adit level set to drive east by three men, at 3*l.* per fm.; between 4 and 5 fms. may be seen a great improvement. There is a good course of grey ore and malleable copper on the foot wall. The lode is nearly due east, with the dip inclining southward.—No. 2: The deep adit level set to drive south-west, by three men, at 2*l.* 18s. per fm.; this level is being driven nearly on the same course as the 12 fm. level, and intended to cut the lode at this depth; there were some small pieces of ore seen in it, and also some greens, but a piece of serpentine has twisted the sides, which I think will be found to be the same as was seen in the 12 fm. level above.—No. 3: Set the 12 fm. level (Dalton's) to stope up, by two men, at 2*l.* 5s. per fm.; this pitch at present continues very good; the whole width, from wall to wall, on the south end, is about 7 ft., with malleable copper on the foot wall, and grey ore on the hanging wall, between which is filled up with orey-looking ground, having small strings of grey ore and malleable copper passing through it. We can only work this level, at present, about 3 ft. wide; consequently we are leaving the malleable copper in the ground, and driving by the side of the hanging wall, from which we are getting some very fine rich grey ore. The engine, and the whole of the materials purchased at Wheal Grey, will be delivered on the mine this week. I have much pleasure in saying, that the timber of the engine-house, &c., all turns out very good, being nearly new, and will come in for the same purpose again.

— Oct. 18.—The deep adit level, east of Dalton's winze, continues to look very promising, though the walls are a little twisted about this place; the deep adit south-west level is much the same as last week, the walls (as was last reported) continue irregular, which we also found to be the case above. I expect we shall cut ore shortly, and I shall feel disappointed if we do not find the east level, this one, and the 12, to be all one lode. The 12 continues to have a good course of grey ore on the hanging wall, but, on account of the great width of the lode just here, we are leaving the foot-wall, on which the malleable copper is found, for the present. The whole of the engine and materials are now arrived on the mine.

WEST WHEAL JEWEL.—Capt. R. Johns (Oct. 16) reports—In the 70 fm. level, west of Williams's cross-course, on Wheal Jewel lode, no lode taken down in the past week. In the 57 fm. level west, on the same lode, the lode is worth 5*l.* per fm.; in the 57 fm. level east, on the same lode, the lode is worth 3*l.* per fm.; in the rise in the back of the 57 fm. level, west of Williams's cross-course, on the same lode, the lode is worth 5*l.* per fm. In the 47 fm. level, west of Williams's cross-course, the lode is 20 in. wide, producing stones of ore; in the deep adit, west of Hodges's cross-course, on the same lode, no lode taken down in the past week. In the 30 fm. level, west of Quarry shaft, on Tolcarne tin lode, the lode is 2 ft. wide, looking very promising for tin. In Tregoning's shaft sinking under the 12 fm. level, the lode is 2 ft. wide, producing stones of tin; no lode taken down in the deep adit, west of Quarry shaft, in the past week. The stopes in the back of the 12 fm. level, east of Pryor's winze, on Tolcarne tin lode, now working on tribute, worth 20*l* per fm.; the stopes west of Pryor's winze, in the back of this level, now working on tribute, worth 26*l.* per fm.; the stopes now working on tribute, in the bottom of this level, worth 22*l.* per fm.

WHEAL ANDERTON.—Capt. J. Carpenter (Oct. 12) reports—The lode in the 80 fm. level, east of shaft, is very much improved, carrying a leader of good tin work on the north part, from 20 in. to 2 ft. wide, with some good stones of tin in the elvan, on the south wall; the lode altogether is 5 ft. wide. I expect we shall get through the slide in the west end of the 80 by the latter end of this week; it is precisely the same sort of ground as we had in the 60 and 70 fm. levels, over this part. The lode in the back and bottom o fthe 80 is very good—working it respectively, in the bottom at 4s. in 1*l.*, in the back at 4s. 6d.; the other pitches, in the 70, varying from 6s. 6d. to 8s. in 1*l.* The engine-shaft is being sunk about 2 fms. under the 80; I expect it will take three months to get it to the 90, and cut the lode in that level; the ground is favourable for sinking, being a blue killas, very settled, and requiring no timber—price, 10*l.* per fm. I have every confidence in making the usual returns until this work is completed to the 90 from the levels now opened, when, in all probability, judging from present appearances, we shall increase the quantity, as we have heretofore done, from opening ground, or developing the lode deeper.

WHEAL FORTESCUE.—Capts. S. Seccombe and J. Key (Oct. 3) report The engine-shaft is sunk 33 fms. below the adit, or 13 fms. below the 20 fm. level, leaving 7 fms. more to sink to reach the 40 fm. level, at which depth we propose to drive two cross-cuts, one north and the other south, to intersect the different lodes. The distance to drive north, to meet the Wheal Maria lode, will be about 8 fms.; and, judging from the appearance of this lode in the 20 fm. level, we fully calculate on finding the lode productive at that depth. The ground in the engine-shaft has not proved so favourable for sinking as was calculated on, there being a large portion of quartz, intermixed with killas.

WHEAL INDUSTRY.—Capt. W. Thomas (Oct. 9) reports—I have set the adit to drive north, on the caunter lode, 4 fms., at 18s. per fm., where they have some saving work for tin, and, from present appearances, there is every reason to suppose the lode now from 10 to 12 fms. will be cut rich, if the caunter lode holds good; it is fine strong tin indeed; Richard Dunn to drive east 2 fms., at 55s. For the present the lode is small, but a large stream of water issuing from it evidently shows it to be larger not far off from us. As we have now some good saving work, I have put a man to cut a plat, to separate it from the attle, or rubbish, at the bottom of the new shaft, so as to save the work in a proper manner. I hope, from appearances, soon to cut the lode not far off us for tin. We have also a necessary job to drive west on the caunter lode—that is, the western caunter—which will let down a lot of the water which is now falling in the shaft, otherwise we shall be obliged to secure it with timber, to prevent its coming together, and timber will certainly be more expensive by far. We hope soon to be raising tin, so as to work the stamps.

WHEAL MARY ANN.—Captain P. Clymo, jun. (Oct. 16), reports—The lode in the 50 fm. level, south of the boundary, is 1½ ft. wide, and worth 4*l.* per fm. The lode in the 40 fm. level, south of Barratt's shaft, is 2½ ft. wide, andt. worth 8*l.* per fm.; the lode in the 40 fm. level, north of Pollard's shaft, is 2 ft. wide, and worth 8*l.* per fm.; in the same level south it is 2 ft. wide, and worth 6*l.* per fm. The lode in the 30 fm. level, south of Pollard's shaft, is 1½ ft. wide, and worth 5*l.* per fm.; the driving of this level is suspended for the present, and the men are rising in the back, to hole to a winze sunk under the 15 fm. level for ventilation; the lode in the rise is 1½ ft. wide, and worth 9*l.* per fm.; the lode in the winze, sinking under the 30 fm. level, north of the shaft, is 2 ft. wide, composed of gossan, can, and some good stones of lead. The stopes are looking well, but the ground is hard—consequently, we are not raising lead so fast as I anticipated.

WHEAL VINCENT.—Capt. J. Spargo (Oct. 19) reports—During the last week or ten days of dry weather, the water has decreased in the shaft on the course of the new lode, and, being anxious to prove it a few feet deeper, I put a couple of men to sink it; by so doing, I am happy to inform you, the lode is getting larger, as well as producing excellent work, for it appears, as we get deeper, the lode improves in size and quality. Our stamps are at work, and we have commenced dressing. The ground in the south cross-cut is still favourable, having got through the hard bar last reported. I expect little alteration before we come within a few feet of the lode, where I expect to find the ground much softer.

WHEAL TRELAWNY.—Captain P. Roskilly reports—The ground in the 72 cross-cut, in Phillips's shaft, is still favourable. The lode in the 62, north of Phillips's shaft, is 5 ft. wide, and worth 15*l.* per fm.; in this level south the lode is producing more ore than I have seen for some fathoms, and looks promising to have a good lode shortly; the stopes, in the back of this level, are producing a fair quantity of ore. The same will apply to the lode in stoping the bottom of the 52 fm. level. The ground in Trelawny's shaft, and in the 22 cross-cut east, is very similar to my last report. The lode in the 52, north of Trelawny's shaft, is large, and worth 10*l.* per fm.; the stopes, in the back of this level, are producing a fair quantity of ore. The lode in the 42 north is 2 ft. wide, and worth 13*l.* per fm.; the stopes, in the back of this level, are producing a moderate quantity of ore. At the north mine, the lode in the 50, north of Smith's shaft, is 3 ft. wide, and worth 6*l.* per fm.; the water being drained from Smith's shaft, under the 30 fm. level, we have resumed sinking it, where the lode is worth 11*l.* per fm. We sampled, on Friday last, a parcel of ore, computed 97 tons, to be sold on the 21st inst.

WHEAL FORTESCUE.—A correspondent, "A Shareholder," has forwarded us a circular, signed by Mr. J. Matthews, the purser of this mine, stating that a call of 1*l.* per share was made on the 3d inst., and that, if not paid within 30 days, the shares become forfeited. "A Shareholder" complains, that the London and other out-adventurers can obtain no authentic information of the working position and prospects of the mine; and, notwithstanding there is a purser at 2*l.* per month, a manager at 2*l.* per month, and a resident captain at 4*l.* per month, to look over nine men, they obtain no regular reports, or statements of accounts, or other information, except that a call has been made, and must be paid. He states that some time since he saw a statement of accounts, from which it appeared that there were arrears of calls due amounting to 240*l.*, and since that he has understood that the arrears amounted to 210*l.* The out-adventurers are most certainly entitled to more information than appears to be generally given in this case, and they have a right to demand the payment of arrears before they are pressed for fresh calls. We should recommend our correspondent to call a meeting of the London shareholders, and jointly endeavour to obtain a full explanation of the position and prospects of the company. A short statement of accounts, showing the amount in arrear, will be found in another column.

THE ECTON MINE.

SIR,—Observing amongst your extracts from correspondence, in the *Mining Journal* of Saturday last, a paragraph relative to the Ecton Mine, I beg to say your informant was in error, in saying that the discovery made did not exceed 50 yards from the boundary of the Burgoyne sett; it having since been accurately measured, and found to be 295 yards from the said sett. The banquet also alluded to was merely a general meeting of the shareholders, for the purpose of transacting the ordinary business of the mines. JOHN WILLIAMS.

Ecton Cottage, near Ashbourne. Derby, Oct. 19.

MR. J. T. TREFFRY—PROPOSED TESTIMONIAL.

SIR,—If there be one man in the county of Cornwall who can be called the miners' friend, it is Mr. J. T. Treffry—a gentleman who we all honour and esteem, who not only spends his time amongst us, but his money, and whose example, while it is worthy of being followed, has, doubtless, its effect, and renders him beloved and respected by "one and all." It is not alone the large interest he possesses in the Fowey Consols, the Par Consols, and his mines at Newquay, but his smelting-works, the vast expenditure on the canal communication, the breakwater at Par, and his two lines of railway, the splendid viaduct and aqueduct which he has erected, and the new line now in course of construction to Newquay, crossing the county, the cost of which alone will, I am given to understand, exceed 100,000*l.*—expending, as he does, every shilling which he so deservedly realises from his investments. As the principal proprietor of the port and town of Fowey, he is respected and revered; while simple in his habits, he has expended upwards of 100,000*l.* in giving employment to the artisan and mechanic, in building the "Place"—a residence which her most gracious Majesty honoured with a visit.

My object in writing you is to suggest that, through you, and the medium of the *Mining Journal*, a public meeting should be called in the county, and a subscription entered into, with the view of testifying the respect in which he is held, and which, I feel assured, if the operative miner was permitted to render his dole, would have the subscription of thousands. It is with the hope that, in thus inviting your attention, I may have the delight and pleasure in reflecting that I was the humble medium, through your columns, of awaking the attention of the miner, and those connected with mining pursuits, to the subject.—A WORKING MINER: *Oct.* 10.

MINING NOTABILIA.

[EXTRACTS FROM OUR CORRESPONDENCE.]

[Under this head we give copies and extracts of letters occasionally received from correspondents—not as official communications, but as the opinions of parties, or practical men, who may be interested in the respective mines, or forwarded merely as information. Considering them more of a private character than for publication, we do not give the authorities; still we shall at all times be ready to produce the original letters to any shareholder who may be desirous of perusing them.]

SOUTH CARADON.—This mine has not looked better, if so well, for the last four years.

WEST CARADON never looked so rich since her commencement.

CARADON WHEAL HOOPER must come out very shortly, for South Caradon is very rich on the same lodes, and are within 70 or 80 fms. of our boundaries. They are sinking an engine-shaft about 70 or 80 fms. north of our sett, some fathoms east of our engine, which is in the middle of the sett; so that you perceive they are working all around us, and they have copper east, west, north, and south of us.

CARADON COPPER MINE is looking extremely well, and promises to be one of the best mines in the neighbourhood. The north lode they have been working on is full 6 ft. wide in the 80 fm. level, with a leader of ore in it 15 inches wide; this is to the south of Caradon Wheal Hooper. Had I been situated as you are, I should direct my attention to this mine a little. I think something may be done here after a week or two.

CARADON UNITED is but dull. I have been underground here twice, and I cannot recommend anything where they are working. The large lode that I saw in the 28 does not look so promising in the 38. My opinion is, that they ought to be excavating further south, where they have some very kindly lodes. I should sink on one or two of them, as they can connect rods to the same engine, if needful.

CARADON MINES are very poor, but not extended on far enough as yet.

MARKE VALLEY is much as she has been for months. But she will do well if copper advance to about 110 standard—pay a dividend, I should think.

PHŒNIX I can say but little about; I have heard, rather poor.

WHEAL AGAR has been suspended for the last two months; and resumed operations on Thursday, the 12th inst., with 14 men—that is, miners—besides labourers. She is very promising; indeed, West Caradon party have bought 54 shares in her. She is divided into 128ths.

GWINEAR CONSOLS.—The 20 fm. end west has not so much mundic in it; we have gotten from it this week some good stones of bright yellow ore, but not sufficient to save the whole lode. We are approaching towards the dip of the great course of black ore and mundic which we had in the adit, and a good bunch of ore we had in the 10 fm. level.

[From the *Plymouth Journal.*]

PLYMOUTH WHEAL YEOLAND.—The engine-shaft will be sunk to the 35 fm. level by the end of this month, at which level the lode will be intersected by a cross-cut of about 5 fms. This will prove the lode under the slide, and, from the favourable change in the ground which has taken place in the engine-shaft, a good lode is anticipated, and the ore ground which was left in the bottom of the 20 fm. level will be worked away. The south adit is being continued; but, as the underlie of the lode has slightly changed, the lode may not be cut here for some time to come. The lode in Odgers's shaft is still holding down, and maintaining its character. The average value of the last 9 fms. has been full 20*l.* per fm. A railway is commenced from this shaft, to carry the ore to the stamps, whereby a considerable saving will be effected, and the mine is fast assuming a permanent character. At a meeting of adventures held on Thursday last, it was agreed, that notice be given to the adventurers whose calls are in arrear, that if they be not paid before the 15th November, the shares will be liable to forfeiture, and that a special general meeting be convened for the purpose of declaring such shares to be forfeited. The creditors of the mine were referred to the defaulters for the settlement of their respective accounts.

WHEAL FRANCO.—The sampling last month was 120 tons.

EXPORTATION OF THE PRECIOUS METALS.—The following are the official returns of the exports of gold and silver from the port of London for the last week:—Silver coin to Belgium, 6000 ounces; ditto to Rotterdam, 19,600; ditto to Calais, 460; ditto to Bremen, 14,730—Silvers bars to Rotterdam, 40,000; ditto to Hamburgh, 190,000; ditto to Calais, 4800; ditto to Havre, 550—Gold coin to Belgium, 519; ditto to Boulogne, 43—Silver bullion and coin to Rotterdam, 38,900—Gold dust to Havre, 33.

THAMES TUNNEL COMPANY.

The number of passengers who passed through the Tunnel in the week ending Oct. 14, was 15,330; amount of money, £63 18s. 3d.

Proceedings of Public Companies.

MEETINGS DURING THE ENSUING WEEK.

MONDAY ... Real del Monte Mining Company—offices, at One.
Cascade Mining Company—Queen's Arms Tavern, Cheapside, Twelve.
WEDNESDAY ... Lewis Mining Company—offices, at Four.
Callington Mining Company—offices, at Two.
Wheal Franco Mining Company—Plymouth, at One.
Nister Dale Iron Company—offices, at One.
Galvanised Iron Company—London Tavern, at One.
Llynvi Iron Company—offices, at One.
THURSDAY ... Tamar Mining Company—offices, at Two.
Gadair Mining Company—Queen's Arms Tavern, Cheapside, at Twelve.
Globe Insurance Company—offices, at One.
Albion Insurance Company—offices, at Twelve.

CONDURROW MINING COMPANY.

At a two-monthly meeting of adventurers, held at the mine on the 17th inst., the accounts were examined and passed, showing—Balance of last account, 266*l.* 17s. 4d.; labour cost, Aug. and Sept., 856*l.* 19s. 8d.; merchants' bills, 266*l.* 17s. 1d.; lord's dues, 57*l.* 5s. 3d.=1447*l.* 19s. 4d.—By ores sold, 3d Aug., 715*l.* 5s. 11d.; tin sold, 16th Oct., 430*l.*—leaving balance against the mine of 302*l.* 13s. 5d. The following report, from Capt. N. Vivian, was read:—

October 17.—I have to submit to the adventurers in Condurrow the following report of the mine, which I inspected on Saturday last. The 70 is extended 15 fms. east and west of the engine-shaft; the ground in this level is much changed, and in colour from red to blue, which I consider a very good indication; the western end, which is extended 9 fms., has been productive throughout, and for the last 2 or 3 fms. has been very good for copper ore; it is 2 ft. wide, and composed of yellow, grey, black, and crystallised ore, and is driving at 1s. in 1*l.* tribute (no tutwork)—2s. in 1*l.* would be a very good price for it; the eastern end is very promising, yielding some tin, the lode very large, and we are carrying about 4 ft. wide of it. The prospects in extending this level are very encouraging. The 60 fm. level has very much improved from the 50, and has been productive for tin and copper ore for the entire driving from the engine-shaft eastward—say 42 fms.; the eastern back of it is at work by 4 men, on tribute, at 2s. 6d. in the 1*l.*, it is a good wages pitch, and we expect from 50 to 60 tons of high produce ore from this place at our next sampling; there is a winze sunk under it 2 fms., on a good lode, 16 fms. east of the shaft, and the caunter lode, at this level, continues productive. The 50, east of engine-shaft, is extended to where Hope's shaft will come down, and we have set to rise against this shaft. The 40 fm. level has reached Hope's shaft to within 7 fms., and it is sunk 23 fms. below the adit—we expect to complete it to the 60 in the course of six months; this shaft we cleared from the surface, and no one knows when it was first sunk, the bottom of it was found 22 fms. below the surface—when to the 60, we shall have sunk it about 90 fms. We are also sinking Llandow'r shaft on Llandow'r lode. The engine-shaft is set to sink 10 fms. below the 70 at 20*l.* per fm. We are carrying on very extensive tutwork on both lodes, and opening much ground, and the mine has vastly improved in the bottom levels. The extra outlay in building a burning-house, with the two ovens, and all the appliances of floors, hutches, dressing apparatus, &c., besides securing Woolf's shaft, preparatory to our working the old mine, and other sundries, may be estimated at 300*l.* Our next sampling, judging from present appearances, will be larger than any we have hitherto had. We calculate on having 100 tons of very good ore from the main lode.

SOUTH WHEAL TOLGUS MINING COMPANY.

A general meeting of adventurers was held at the mine, on Tuesday, the 10th inst., when the accounts for July and August were presented, showing—By call of 30s., made Aug. 10, 384*l.*; sale of copper ores, Sept. 28 (less 1-15th, lord's dues), 859*l.* 17s. 11d.=743*l.* 17s. 11d.—To balance of last account, 172*l.* 19s. 3d.; mine cost and merchants' bills for July and Aug., 433*l.* 11s. 3d.—leaving to credit of next account, 137*l.* 7s. 3d. The accounts were examined and passed, and the following report, from the agent, submitted:—

I need scarcely remark, that the details which I have just given exhibit a very decided improvement in the state of the mine since the meeting in August last. The discovery made in the 12 fm. level, west of the engine-shaft, has far exceeded our expectations, inasmuch as the lode is much larger and more productive than we had found it to be in the adit level; and we are thereby induced to place greater confidence in its holding good in depth. The usual size of the lode in the adit level east, with the fact of its continuing to yield moderate quantities of ore, serve to confirm the favourable opinion which we always held respecting the eastern ground, and we look forward to valuable discoveries being made in that part of the mine at no distant day. We have now the means of adding considerably to the returns; and hope that for the current two months their amount will be somewhere about 700*l.* An increase of costs will also result, from an extended scale of operations, which the improved condition of the mine renders necessary; but this will take place gradually, and every means will be used to keep them within the narrowest limits which our scale of working will admit of.

WHEAL MARY MINING COMPANY.

At the two-monthly meeting of adventurers, held at the mine, on Wednesday, the 11th inst., the accounts were examined and passed, showing—Call, Aug. 9, 495*l.*; silver-lead ore sold, May 19, at 93*l.* 10s. per ton, 288*l.* 4s. 6d.; June 30, ditto, 87*l.* 19s. 9d.; Aug. 3, copper ore sold, 186*l.* 1s. 9d. (less dues), 31*l.* 4s. 9d.=1026. 1s. 3d.—By costs for July, 324*l.* 6s. 2d.; ditto August, 327*l.* 6s. 3d.; merchants' bills, 223*l.* 12s. 8d.; balance, last account, 54*l.* 19s. 6d. = 930*l.* 4s. 7d.; leaving balance in favour of adventurers of 95*l.* 16s. 8d.—A call of 10s. per share was made, and the engineer directed to take the necessary steps for attaching a crusher to the steam-whim. The following report from Capts. Paul Rabey and C. Andrawartha was read:—

Oct. 11.—In the 80 fm. level west, on Wheal Mary lode, the lode is 4 ft. wide, and will produce 2 tons of ore per fm., with every appearance of further improvement; the rise in the back of this level will produce from 4 to 5 tons of ore per fm. The 40 fm. cross-cut south has been driven 63 fms., and we have just cut the elvan which forms the north wall of the lode at the surface, and we may, therefore, expect to cut the lode on getting through the elvan; the north cross-cut, in the same level, is driven 8 fms. north of Parent lode, towards Orphan lode, through a very fine channel of ground. In the 40 fm. level west, on Parent lode, we have driven about 8 fms., the lode is in disordered ground and poor; the eastern end, in the same level, we have suspended for the present, on account of rising against Chadwick's shaft. In the 20 fm. level west we have driven about 8 fms. from the shaft, and have a good lode, varying from 1 foot to 18 in. wide, producing about 3 tons of superior ore per fm.; the lode in the eastern end, in the same level, at present is not rich, but kindly, with good stones of ore. In the rise, against Chadwick's shaft, the lode varies from 2 ft. to 2½ ft. wide, producing 4 tons of very superior yellow ore per fm. At Chadwick's shaft, sinking below the 20 fm. level, the lode has been poor for the last 6 ft. in sinking, but at present is improving, containing good stones of ore; we hope to communicate the shaft with the rise in about a fortnight, and are getting ready our flat-rods to sink on Parent lode, under the 40 fm. level, where we have a fine course of ore gone down. We are continuing to raise about 1½ ton of silver ore per month; and as soon as we have holed Chadwick's shaft, and are enabled to open on the lode, our copper samplings will be considerably increased. On the whole, we beg to report that our prospects are more encouraging than they have ever yet been; and that, as within about eight months our cross-cuts will intersect three other lodes, we are very sanguine of the ultimate success of this mine.

WHEAL WALTER MINING COMPANY.

A meeting o fshareholders was held at 4, King-street, Cheapside, on Wednesday, the 18th inst.—HENRY SMITH, Esq., in the chair.—Mr. CROFTS acted as honorary secretary.

The minutes of the preceding meeting, &c., having been read, the CHAIRMAN briefly stated the object of the meeting, which was that of receiving an amended balance-sheet from the purser (Mr. Walter Weekes), that presented at the previous meeting requiring revision, as certain items were not recognised by the meeting; and there appearing to the shareholders to be some discrepancies between the account submitted, and certain statements made on the occasion; it being understood, that in the interim of the adjourned meeting being held, Mr. W. Snell, with Mr. J. Weekes, should examine the accounts, and that the purser should be in attendance at the adjourned meeting, to offer any explanations which might be deemed necessary. He now wished to know whether any amended balance-sheet had been prepared.

Mr. FOX rose for the purpose of stating, that he attended there on behalf of Mr. Bridgman, as the representative of Mr. W. Weekes, and not being capable of affording any further information than that conveyed in a letter he had received from Mr. Bridgman, he would, with the permission of the meeting, proceed to read such document, which he would lie on the table, for the perusal of any adventurer. He then read the letter, from which it appeared, that the only alteration, or amendment, to the balance-sheet previously submitted, was a reduction of 17*l.* 2s. 8d. from the balance of 129*l.* 5s. 6d. due to the purser, as appeared by such statement, the sums due to merchants and others, in addition thereto, being 38*l.* 9s. 3d. Such deduction arising from certain sums paid by the committee, but which the purser had included in the balance due to him. It appearing that at the former meeting, certain items which formed the account were not sanctioned or approved by the meeting, the letter went on to state, that the sum of 114*l.*, returned as damage to land, had been sanctioned and approved at a meeting of the adventurers, and further entering into particulars, as related to other sums in dispute.

The CHAIRMAN wished to offer a remark with reference to the balance-sheet in question, and also to the minutes of a meeting of the finance committee, at which Mr. W. Weekes was present. In the first place, it appeared that in part payment of a balance of 356*l.* 4s. 7d., due from the purser, a cheque for 63*l.* 14s. 7d. had been given, which did not appear in the sheet then before the meeting, although credit had been given for a bill for 200*l.*, which had been since duly paid—this one item alone, in the absence of any explanation, was in itself sufficient to show the inaccuracy of the accounts.

Mr. W. SNELL submitted a rough account, which he had drawn up, showing that, after deducting 94*l.* from the charge for damage of land and calls on shares, there was a balance due from the purser.

A lengthened conversation enaned, in the course of which Mr. ENGLISH stated, that he was in receipt of a letter by that morning's post from Mr. Weekes, with copy of balance-sheet, but which he deemed it unnecessary to lay before the meeting, after the letter of Mr. Bridgman having been read, as the main features were therein treated on. He had no hesitation in saying, that Mr. Weekes was influenced alone by one principle, and that if it could be shown that the accounts transmitted by him were in any respect wrong, which Mr. Weekes contended they were not, he would most readily abide by the decision of any impartial person, and he would suggest that two or more gentlemen be requested to act as a committee to investigate and report upon the accounts, with whom he should be most ready to act as the representative of Mr. Weekes, feeling well assured that the result would prove satisfactory to all parties.

He considered that the question at issue was very simple, and required but a proper understanding.—In the end, the appointment of a committee was determined upon, consisting of the Chairman, Mr. Poole, and Mr. W. Snell, Mr. English being added thereto as the representative of Mr. Weekes—it being understood that gentleman should be duly authorised to act on Mr. Weekes's behalf, and, moreover, that all books and vouchers should be laid before the committee so appointed.

Thanks having been given to the chairman, the meeting adjourned.

STRAY PARK AND CAMBORNE VEAN MINING COMPANY.

A general meeting of shareholders was held at the mine on Friday, the 13th inst., when the statement of accounts for July and August were presented, showing—By sale of copper ores, 5d August, 1860*l.* 19s. 4d.; balance in hand, 328*l.* 8s. 7d.—2189*l.* 7s. 11d.—Tutwork cost and merchants' bills, July and August, 802*l.* 7s. 1d.; tribute and subsist, 738*l.* 4s. 10d.; lord's dues, 77*l.* 10s. 10d. —leaving balance of 631*l.* 8s. 2d. in favour of adventurers.—By sale of copper ores, 5th Oct., 2221*l.* 13s. 5d. The accounts, having been examined, were allowed, and the following report from the agent read to the meeting:—

Oct. 13.—In the 70, driving west, the lode is 18 in. wide, yielding 2 tons of ore per fm. In the 80 end, driving west, at Wheal Francis, the lode is 18 in. wide, yielding 2 tons per fm. In the 90 end, driving west, at Wheal Francis, the lode is 18 in. wide, yielding stones of ore; this end is in an improving state, and we have reason to expect a material change for the better within the ensuing month. In the winze sinking below the 90 fm. level the lode is 2½ ft. wide, yielding 5 tons of ore per fm. In the 100 end, driving west, the lode is 3 ft. wide, yielding 6 tons of ore per fm.; in the rise above this level the lode is 2 ft. wide, yielding 4 tons of ore per fm.; in the winze sinking below this level the lode is 2 ft. wide, yielding 4 tons of ore per fm.; in the 100 end, driving west, the lode is small and unproductive. In the 120 end, driving west, the lode is 2 ft. wide, yielding 1 ton of ore per fm. In the 150 end, driving west, the lode is 2 ft. wide, yielding 2 tons of ore per fm. In the 180 end, driving east, the lode is 2 ft. wide, yielding 2 tons of ore per fm.; in the same end, driving west, the lode is 3 ft. wide, orey throughout, but not rich. At Wheal Frances we have cleared up the old workings down to the 56 fm. level; and in this level we are driving a cross-cut north, at 40s. per fm., which will intersect the Town lode within 10 fms. further driving. The tribute ground throughout these mine's continues to look very well, and our next sampling will not fall short of 500 tons.

WHEAL SETON MINING COMPANY.

At the usual two-monthly meeting of adventurers, held at the mine on the 10th inst., the accounts were examined and passed, showing—Copper ore sold 6th July, 1645*l.* 10s. 6d.; ditto, 3d Aug., 2469*l.* 15s. 7d.; less dues, 274*l.* 7s.= 3840*l.* 19s. 1d.—By cost for July, 1256*l.* 6s. 11d.; ditto, Aug., 1128*l.* 17s.; merchants' bills, 562*l.* 6s. 8d.=2947*l.* 10s. 7d.—leaving balance in favour of adventurers, 893*l.* 8s. 6d.; to which add, over from last account, 555*l.* 12s. 10d. =1449*l.* 1s. 4d.—deduct dividend, 10*l.* per share, 990*l.*, leaves balance in hand of 459*l.* 1s. 4d. A dividend of 10*l.* per share was declared, and balance carried to credit of next account. The following report, from Capts. Paul Rabey and Stephen Lean, was read to the meeting:—

Oct. 10.—We have intersected Bull's lode in the 100 fm. cross-cut, 1 ft. wide, composed of spar, mundic, &c., about 5 fms. from shaft. In the 90 fm. level west, on the north caunter, we are carrying about 7 ft. of the north part of the lode, which will produce 8 tons of ore per fathom—we have no south wall. In the 80 fm. level west, on ditto, the lode is 6 ft. wide, producing 8 tons of ore per fm., and no south wall; in a winze sinking below this level, we are carrying about 4 feet of the lode from the north wall, which will produce 8 tons of ore per fathom—down 4 fms.; the stopes in the back of this level will produce 30 tons of ore per fm. In the 70 fm. level west, on ditto, we are carrying about 7 ft. of the lode, which will produce 10 tons of ore per fathom, and no south wall; the stopes, in the back of this level, will produce 20 tons of ore per fathom. In the 60 fm. level west, on ditto, lode 5 ft. wide, producing 1 ton of ore per fm., with every prospect of a speedy improvement; the stopes, in the back of this level, will produce 15 tons of ore per fm.; the lode in the boundary winze, sinking below this level, is 5 feet wide, and will produce 8 tons of ore per fm. The boundary winze, sinking below the 60 fm. level, on ditto, has been communicated to the 60 in the past month. The 60 fm. level, east from Tilley's cross-cut, on ditto, has been extended 2 fms. from the point of intersection, lode 5 ft. wide, and will produce 8 tons of ore per fm.; in the 60 fm. level west, on ditto, lode not taken down for the last 6 ft. driving. In the 80 fm. level west, on the south caunter, lode 6 ft. wide, producing 4 tons of ore per fm. In the 70 fm. level west, on ditto, the lode is 1 ft. wide, containing good stones of ore. The winze, sinking below the 60 fm. level west, on ditto, has been communicated to the 70 fm. level in the past week—the lode for the last 2 fms. has been unproductive. In the 90 fm. level west, on Kneebone's branch, the lode is 4 ft. wide, and will produce 2 tons of ore per fm. In the 80 fm. level west, on ditto, the lode is 2 ft. wide, producing 2 tons of ore per fm.; in the 80 fm. level west, on the middle branch, the lode is 3 feet wide, producing 3 tons of ore per fm. In the 60 fm. level east, on ditto, the branch is 18 inches wide, producing 2 tons of ore per fm.; in the 60 fm. level west, on ditto, the lode is 2 ft. wide, producing 1 ton of ore per fm. Tilly's shaft is sinking below the 60 fm. level, down from 8 to 9 fms., ground hard. Cocke's engine-shaft, sinking below the 44 fm. level, down 7 fms., ground favourable. Harvey's shaft, sinking below the 34 fm. level, down 8 fms., suspended in consequence of water, and the men are put to drive west in the 44 fm. level to get under the shaft, in order to rise against it. We are continuing our cross-cuts south in the 44 fm. level from Cocke's, and shall commence cross-cutting north in the same level on holing Harvey's shaft, not having air at present to drive the same. We are putting our new drawing engine in the house, and hope to get it at work in about a month.

WHEAL TREMAYNE MINING COMPANY.

At a meeting of adventurers, held at the offices, George-yard, Lombard-street, on Friday, the 20th inst., the accounts were produced, showing—

To labour and miscellaneous cost for July					£729	3	9	
Merchants' bills					243	16	3	973 0 0
Labour and miscellaneous cost for August					880	19	2	
Merchants' bills					133	8	7	1014 7 9
Total								£1987 7 9
Aug. 10—By copper ore	*Tons*	64	15	0	0	£215	3	1
26—Black tin		8	1	3	23	307	0	3
Sept. 7—Copper ore		47	10	2	3	137	19	1
22—Black tin		16	13	0	18	687	9	1
Oct. 12—Ditto ditto		11	13	3	2	503	1	3
Arsenic		10	0	0	0	55	0	0
Less lords' dues (1-20th)						£ 94	5	8—1791 7 1
Carriage of tin								18 4 3
West Wheal Providence adventurers—water charge								24 0 0
Total								£1833 11 4

Leaving a balance of £153 16s. 5d.

The stock account of tin, as taken at the mine, was submitted, showing—41 tons 13 cwts. 1 qr. 16 lbs. of black tin to be now on the mine, besides tinstuff, slimes, &c.

The following report, from Capts. J. Phillips and W. Blewett, was read:—

Wheal Tremayne Mine, Oct. 11.—We have drawn the water out of the old flat-rod shaft, and have commenced driving the 85 fm. level west; the lode is 1 foot wide, producing 1 ton of copper ore per fathom, of good quality. In the 50 fm. level, on the south lode, west of the cross-cut, south of Michell's shaft, the lode is 3 ft. wide, and is worth 6*l.* per fm. for tin; we have opened in this level 34 fms. of good tin ground. Maddon's shaft, on the south lode, is sunk 5 fms. below the 40 fm. level; the lode is 3½ ft. wide, and worth 7*l.* per fm. for tin; we expect to communicate this shaft to the 50 fm. level by the end of this week. In the 40 fm. level, west of this shaft, the lode is 2½ ft. wide, producing moderate work for tin; in the 40 fm. level, east of the shaft, the lode is 3½ ft. wide, and worth 4*l.* per fm. for tin: this part of the mine is looking very promising, as the ground can be opened very cheap. In the 30 fm. level, west of Field's shaft, on the south lode, we find it 2½ ft. wide, orey throughout; this level is driven 6 fms. west of the flookan; we have stopped driving the end for the present, in order to communicate to the 18 fm. level for ventilation, and as well to enable us to set more tribute ground; the lode in this rise is 2 feet wide, producing 1 ton of copper ore per fathom. In the 10 fathom level, east of the winze, the lode is 2½ feet wide, producing 1½ ton of copper ores per fathom. Our present prospects will fully warrant an expectation that we shall increase our sampling of copper ore next month, and still more in the month after. The lode in the 63 fathom level, west of Pollard's shaft, is 10 inches wide, producing good stones of tin and copper ore; this level is driven 120 fms. from Pollard's shaft, and we have about 6 fms. more to drive to get under the new shaft; the water is going down gradually, and we hope shortly to see this place drained to the 58 fm. level. In the 40 fm. level, about 7 fms. west of the new shaft, on the engine lode, we have sunk a winze 2 fms. deep, and which has produced 100*l.* worth of tin—this is the best lode we have ever seen in the mine. All the branches are much the same as they have been for some time past; at the north end, we are still raising a large quantity of tinstuff. We find our quantity of tin has increased since the last meeting about 10 tons, and we find our tinstuff so increasing on the stamps, that we are about erecting 12 additional heads, which, when completed, will make altogether 36 heads, thereby enabling us to make a much larger monthly return.

Cleveland Mine.—A general meeting of shareholders was held on the 2d inst., when a statement of accounts was presented, showing—By sale of tin (less dues), 22*l.* 4s. 10d.; call of 1*l.* per share (less arrears), 187*l.* 10s.= 209*l.* 14s. 10d.—By mine cost, from Oct. to July, 154*l.* 11s. 1d.; merchants' bills, 45*l.* 9s. 2d.; showing, in favour of mine, 9*l.* 14s. 7d.; which, deducted from balance end of Sept., 82*l.* 0s. 9d., leaves 73*l.* 6s. 2d. now against adventurers; to pay off which, and further prosecute the mine, a call of 10s. per share was made.

Grambler and St. Aubin.—At the two-monthly meeting of adventurers held at the mine, on the 10th inst., the accounts were examined and passed, showing—Labour cost, July and August, 317*l.* 9s. 10d.; merchants' bills, 108*l.* 4s. 11d.=425*l.* 14s. 9d.—By copper ores sold, 481*l.* 18s. 6d.; tin ore ditto, 9*l.* 4s.; less lord's dues, 27*l.* 5s. 8d.=463*l.* 16s. 10s.: leaving profit of 38*l.* 2s. 1d., which, deducted from 225*l.* 11s. 5d., owing purser at last account, leaves balance against the adventurers of 187*l.* 9s. 4d.—It was then resolved, that the resolution of the 21st July last, for the sale of the mine to Mr. Soper, be rescinded—that the resolution of the 13th June last, to stop the raine, be annulled —that the agents continue the present workings—and that Mr. Stokes and Captain Richards be directed to proceed against defaulting adventurers for their arrears of calls.

West Wheal Providence.—At a quarterly meeting of adventurers, held at the mine, on the 11th inst., the accounts were examined and passed, showing—Labour cost for June, 118*l.* 13s. 4d.; July, 139*l.* 2s.; August, 139*l.* 7s. 5d.; merchants' bills, 50*l.* 3s. 9d.=447. 6s. 6d.—By tin sold (less dues), 458*l.* 10s. 5d.: leaving 11*l.* 3s. 11d. in favour of adventurers, which, added to balance end of May, 3*l.* 5s. 9d., leaves amount in hand, 14*l.* 9s. 8d.—Capt. Penglase's report we shall insert in our next.

Wheal Fortescue.—At a meeting of adventurers, held at Tavistock, on the 3d inst., the accounts were examined and passed, showing—Balance from last account, 151*l.* 7s. 10d.; call made 11th May last, 256*l.*—407*l.* 7s. 10d.—By costs, four months, 231*l.* 0s. 2d.—leaving balance, when all calls are paid, of 176*l.* 7s. 8d. The calls due, in arrear on the day of meeting, amounted to 205*l.* 7s. 11d. The report will be found among the Mining Correspondence.

Ruby and Garlidna Mine, Wendron.—We much regret the announcement of the intended abandonment of this mine, whereby a great number of persons will be thrown out of employment, at a time when there is but little chance of their procuring work at any others in the neighbourhood, and the gloom of such a circumstance is fully known only to those who feel its effects. We hear the mine, for the past five months, notwithstanding the low price of tin, has met the cost; but some of the tribute pitches being exhausted, the returns are, at the present time, inadequate. The lode in the ends has a very promising appearance, which is fully corroborated by the reports of several respectable and practical mine agents, who have inspected it, and whose opinion favours the idea, that the mine would, doubtless, be soon turned to a profitable issue, were a comparatively trifling sum expended monthly in tutwork, by opening on the lodes, and preparing a little tribute ground. The depth from surface is but 50 fms., and at each successive level has the lode been found more productive. It were to be wished, that the expectations respecting the probable productiveness of the mine, would be verified by the present adventurers, whose acts of benevolence will long be remembered.

The proprietors of Blenkinsopp Colliery have, for several months, been engaged in sinking a new shaft for opening out an extensive field of coals. The miners have penetrated the coal seam at a depth of 53 fms., and found it to be 6 ft. 1 in. in thickness, and of a very superior quality.

The Tin Trade—(*From a correspondent*).—The stock of block tin being quite exhausted, and orders having been received by the tin smelters which they are unable to execute, tin has, in consequence, risen in price full 3*l.* per ton, and a further advance in price is expected. New tin smelting houses are about to be erected at Charlestown, near St. Austell, on the south coast of Cornwall, which will be of great advantage to the tin mines in the eastern part of the said county, as also to the tin mines in the west of Devon.

There is very considerable improvement in the metal market; and the letters from Wales and Cornwall generally represent business as more brisk, with advancing prices. The Liverpool advices of this morning show a rise of 2*l.* per ton in the price of tin, and 3*l.* per ton in that of fine copper. Lead continues at the same quotation as last week, but with a strong upward tendency. There is an extensive demand for copper sheathings. For antimony, and other metals which do not rank in the same class, there has likewise been much inquiry. Altogether, there is much more cheerfulness in the mineral branch of trade, and a speedy return to the prices from which metals receded, since the general derangement of all commercial matters, is confidently looked for. The smelters, it is expected, will, next month, determine on a considerable advance in the standard of copper. Report also asserts, that an increase will be made next month in the dividends of Wheal Maria (Great Devon Consols). The returns are now 1500 tons per month, which can, it appears, be continued for many years to come.—*Morning Post* of this morning.

BLAENAVON IRON COMPANY.

We have again received a number of communications relative to the position of this property, and must follow the course we adopted last week, of inserting abstracts from the most important points. "A Mineral Agent," Monmouthshire Hills, defends Mr. Deakin's character against the attack of "Veritas," and considers that he acknowledges the truth of the statements, by not attempting to refute them. His opinion is, that the property of the shareholders has been shamelessly wasted, but not by Mr. Deakin, whose character has been too long established to be easily affected, and he is well known to be an experienced clear-headed miner, and the senior mineral agent, with one exception, now employed in the principality.

"Equity," Abersychan, is at a loss to understand why all the reductions proposed to be effected in these works should be left until it is quite too late to expect any good from them. He says, no notice has been taken of Mr. Deakin's charges, and that he ought to substantiate them; we do not think so; it is the duty of the parties complained of to refute them, if erroneous; and until such refutation under proof does take place, the public must believe in their truth. He afterwards calls upon Mr. Deakin to come boldly forward, to divulge everything he knows, and let the shareholders be fully aware of what they have *really* to expect.

"G. E. B." says, that "Veritas" has allowed personal pique to so far get the better of his prudence, as to have caused him to publish a mass of blunders and unfounded assertions. There are one or two points on which "Veritas" has not only not told the whole truth, but has stated an actual *untruth*, in saying that the cost of keeping the horses at Blaenavon in 1847 was 58*l.* per head per annum, which was not so much; and in stating that the company have more horses in proportion to the employ than any other work in South Wales. He explains, that the horse expenses are not only not higher, but not so high, in Blaenavon as at other works, which he can prove by documents; the proportion is certainly greater as far as the furnaces are in question, but not so large if the mileage of the under and above ground haulage be taken into account. He states that "Veritas" places this extra expense on Mr. Deakin, but says nothing in favour of a system by which a large proportion of the coal is buried for ever, and increasing the distance daily to a most extraordinary extent. He also tells the "truth," but not the "whole truth," when he states that the cost of pit-wood increased from 1300*l.* in 1845, to 2300*l.* in 1847. He must have known, and ought to have stated, that the price of pit-wood had increased in that space of time considerably. The get of coal was, moreover, increased to a large extent, while the main roads, headings, &c., were, consequently, extended in greater proportion from the bad system alluded to.

The communication of "Cymry" will be found in another column.

LONDONDERRY IRON MINES OF NOVA SCOTIA.

In the *Mining Journal*, of the 23d Sept., we inserted a report of these mines, by Mr. W. Cairns, a gentleman from Scotland, who accompanied the proprietor, Mr. Ross, on his departure from England. This report, dated 7th Sept., was of a very favourable nature, since which a party of six gentlemen, Messrs. Johnston, Fairbanks, Tempest, Uniacke, Ritchie, and Morton, who had attended a previous meeting in Halifax, for the purpose of considering the prospects of the company, paid a visit to the mines on the 13th Sept., and drew up a report on the following day. From this it appears, that the lands in which Mr. Ross is exclusively interested are situated about a mile from the Folly River, extending westerly towards it; about 50 rods from the road, is the excavation from which the specimens brought to England by Mr. Ross were taken, and around which, in every direction, indications of iron and lime were abundant. Immediately below the surface there is a bed of ochrey ore, easily broken with the pick, and which contains, in abundance, nodules of friable, bright, specular iron ore. The whole distance which the party passed over to the "Folly," presented precisely similar appearances. Eastward of Mr. Ross's land is the property in which that gentleman is interested with the company, which the party did not visit; but, from inquiries made, they were informed, that throughout the same indications existed of lime and iron, equally distinct and abundant; and in which locality a large excavation had been carried from north to south, which fully proved the richness of the district, and with this evidence the visitors were satisfied. Seams of coal and fire-clay exist in alternate layers; three quarters of a mile southward from the mines, one seam of coal, 20 inches thick, appeared to be of good quality—the fire-clay is very pure, 18 inches thick; and, since their visit, they had been informed that a practical miner, on further opening the coal, had discovered a layer of clay-band ironstone, several feet in thickness, and the coal turned out of excellent quality.

The Folly river presents the use of water-power, should it be deemed expedient to employ it; and near its course are convenient situations for the erection of works, sheltered by its high banks. To the north of these deposits, on the property, lies an unbroken forest of hard wood; and to the south are large tracts of forest, chiefly of the softer timber—these would supply ample material for charcoal for smelting. The means of transit for the materials and metal are good—the land having a gradual slope to the south, until it reaches a level plain, extending to Colchester Bay; and a good shipping place, in the Bay of Fundy, may be made at a very moderate expense, about seven miles from the mines. The settlement in which the mines are situated consists of several farms, cleared and cultivated in the manner usual in Nova Scotia; along the road which passes through it, the cultivated land on both sides is uninterrupted, and of a good quality. This road pursues the same general course as the main post-road to New Brunswick, which, keeping generally along the head of the marsh lands that form the banks of the Bay, passes through the plains at the foot of the high-lands.

From the general result of their visit, these gentlemen state, that they found the facts and representations contained in the various reports respecting the Londonderry mines, fully confirmed, and that their previous favourable prepossessions were strengthened; and there appeared to be in one locality a combination of every thing needful for the manufacture of iron.

New Method of Attaching Tires to Railway Wheels.—[Patentees, Charles Green and James Newman, Birmingham, manufacturers. Patent dated April 15, 1848; specification enrolled Oct. 14, 1848.]—The invention of Messrs. Green and Newman consists in a manner of attaching tire-bars to railway wheels. For this purpose the patentees employ a tire-bar, bent into a step-like form, and having a small portion of the lower vertical point bent again at right angles, so as to serve for a catch, or rest, to the felloe of the wheel. This tire is first laid in a die, and the wheel placed therein, so that the felloe part may rest upon the catch. The top vertical portion of the step-like tire-bar is then bent backwards, by being submitted to the action of a series of top dies, until it lies along, and in close contact with, the horizontal portion of the tire-bar, but projecting beyond it, when it is clenched down upon the felloe of the wheel, which is then held fast between it and the rest. In some cases it is clenched between the spokes of the wheel, for the sake of greater security.—*Mech. Mag.*

RAILWAY PROPERTY.

The three great companies have expended 37,500,000*l.*—productive and unproductive capital—as follows:—

Birmingham	£21,514,000	
Great Western	9,715,000	
South Western	6,264,000—37,493,000	
The yearly receipts as follows:—		
Birmingham	£2,340,000	
Great Western	1,140,000	
South Western	520,000— 4,000,000	
Deduct 33 per cent. working expenses		£1,333,333
Total		£2,666,667
Which will pay a dividend of 7 per cent. on 37,000,000*l.*		2,614,510
And leave a balance of		£52,157

Stop the "Bearing" system, together with the 14 days allowed for the delivery of shares, and the public will soon be aroused from the present mistaken view of railway property, which a few capitalists are daily, by these unfair means, turning to their own advantage.

London and North-Western Railway.—At the present time, when the shares in this line are so depressed in value, it may be interesting to examine the traffic returns, and compare them with the previous years. The total amount of the earnings for the week ending Oct. 15, was 44,152*l.* 16s. 2d.—that of the corresponding week of 1847, 43,504*l.* 16s. 4d.; the increase in the past week being in merchandise and cattle, while a slight decrease appears in the passengers—viz.: in 1847, 28,466*l.* 8s. 8d., and in the last week, 28,315*l.* 3s. 3d.

South Wales Railway.—The Chamber of Commerce and the inhabitants of Llanelly have presented a memorial to the directors of the South Wales Railway, urging upon them the desirableness of completing, as soon as possible, the line between Swansea and Llanelly, a distance of nine miles, contemporaneously with the portion between Newport and Swansea, to accommodate the collieries, and lead and copper works of the district, and the increase of the trade of those places between Bristol, Manchester, and London.

The last train, on the opening of the Shrewsbury and Chester, was one-third of a mile in length, and the three engines that drew it conveyed 2000 people.

Railway Materials from France.—The vessel, *Bee*, arrived in the river from Dieppe, has brought a cargo of railway waggons, being returned railway materials from France, after having been used on one of the French lines.

Fall of a Railway Bridge.—About one o'clock yesterday morning, when the luggage and fish train, which leaves Margate about midnight, had reached the bridge which crosses the River Stour, in the hamlet of Chartham, the latter gave way, and the engine, tender, and train, with the materials of the structure, were precipitated into the river and valley below. No person sustained any injury—the driver, stoker, and guards, seeing something wrong, had just time to jump off, before the whole train sunk into the gulf below. The accident is supposed to have occurred from the action of the late excessive floods on the foundation of the bridge.

Chloroform as a Motive Power.—M. Lafond, an officer in the French naval service, has taken out a patent for a new engine, in which chloroform, in conjuction with steam, is the motive power. A trial was made recently at the manufactory of M. Charles Beslay, at Paris, in the presence of several engineers, manufacturers, and deputies. The results obtained from this experiment were highly important, and indicative of considerable economy. The engine has two cylinders, one to be acted on by steam generated in the usual manner. The boiler is vertical, and contains several copper tubes, among which the flame passes into the chimney; and, from the amount of heated surface, the water is quickly raised to boiling temperature. To the other cylinder and piston is attached the chloroform apparatus, consisting of a cylinder of cast-iron placed vertically, containing, like the boiler, a number of copper tubes, the lower ends of which are closed, and the others all terminate in a single pipe in communication with the second cylinder. In these tubes chloroform is placed, and the first cylinder which receives the steam is in direct communication with the chloroform apparatus; the steam having raised the piston in the steam cylinder, and at the same time opened the valve communicating with the chloroform tubes, passes into the cylinder around them, and having the property rapidly to absorb caloric from the steam, the latter is suddenly condensed, the chloroform transformed to vapour, which, expanding along the pipe to the second cylinder, raises its piston—the steam piston is depressed, and the operation goes on alternately. This liquid thus performs the operations of a condensing agent, and a prime mover. The chloroform is, of course, again condensed for repeated use. It will thus be readily understood, that an expenditure of fuel is required only for one motion of the steam piston, the down stroke being performed by the caloric still contained in the steam, sufficient to vaporise the other agent. It is stated that by ether and chloroform a saving of 50 per cent. is secured in proportion to the cost of the common steam-engine, and that "aldehyde" is still more economical.

Plymouth Great Western Docks.—We are glad to learn, that these works are rapidly progressing—the excavations for the construction of the south dock having been carried on with great activity. The large coffer-dam for the locks is also in a very forward state. The steam-engine, which was bought from the Herodscombe Mine, will be started in about a week. Mr. Brunel inspected the works on Tuesday last, and, we understand, expressed himself perfectly satisfied. In an early Number, we shall give a full description of the works, and the prospects of the undertaking, when completed.

Sunderland Docks.—The extensive works now in progress for the formation of the new docks at Sunderland are proceeding in a most rapid and successful manner. The sea has been most effectively banked out of the tidal basin and nearly the whole length of the large dock; and there is the fullest confidence that this gigantic undertaking will be brought to a successful completion within the time fixed; and, what is still more unusual, there is a well-grounded expectation that it will be finished considerably within the estimated cost. The works begin to make a noble appearance, and, when finished, will be a magnificent undertaking. A dock of this magnitude, gained from the sea, within the range of the tides, is an enterprise now proved to be practicable, and a safe undertaking.

Electric Telegraph from Vienna to London.—In a lecture, delivered on Thursday evening, at the Western Literary and Scientific Institution, by Mr. Partington, he stated, as a fact, that it was the intention of the Emperor of Austria, before the late troubles broke out, to have established a telegraphic communication between Vienna and London, by means of a single wire.

Experiments with Galvanized Wire and Hemp Ropes.—An experiment was tried last week in Woolwich Dockyard, to ascertain the comparative strength of wire and hemp ropes. A wire rope, 3 inches round, and a hemp rope of three strands, hawser laid, common make, 7 inches round, were spliced together, and placed in the testing machine, and on the hydraulic power being applied, the hemp rope broke in the middle on the strain reaching 11¾ tons, the wire rope remaining apparently as strong as when the experiment commenced. A wire rope, 3½ inches round, was then spliced with an 8-inch hemp shroud rope, and on the power being applied the hemp rope broke in the middle, with a strain of 10½ tons, the wire rope continuing apparently uninjured.

Steam-Power of France.—According to a late statistical report, made to the Government, the number of locomotive engines constructed in France, and employed by the country in 1842, equalled the number imported from abroad; in 1843, there were two more French than foreign engines; in 1844, the surplus was 44; in 1845, 76; and in 1846, beyond which year the report did not go, this excess was 161. In 1846, there were 294 steam-boats, belonging to private individuals and companies navigating the rivers and seas. The numbers and force of the engines in use on land, and acting as locomotives in the steamers, were, in 1846, as follows—viz.: 4395 engines at work on land, equalling 163,402-horse power; 461 locomotives, of 60-horse power each, upon the average amounting to 27,600-horse power; 338 engines used in steam-ships and boats, amounting to 108,518-horse power. These, together, give a force of 299,515-horse power. Comparing the strength of man to horse-power, it will be found that the steam-engines employed in France, in 1846, were substitutes for 2,097,625 men.

The Alkali Trade.—We understand that at a late meeting of the alkali manufacturers of the Tyne, it was agreed to increase the price of soda, which is now 20s. higher. It is doubtful whether this increase can be sustained; and some have suggested, as a more preferable mode of remedying the embarrassed state of the trade, to lessen the manufacture 20 per cent.—*Sunderland Herald.*

NEW PATENTS.

S. C. Lister, gent., Manningham, York, for improvements in preparing, heckling, and combing wool and other fibrous substances.

F. C. Hills, Deptford, Kent, manufacturing chemist, for improvements in treating certain salts and gases or vapours.

R. A. Smith, Manchester, for improvements in the application and preparation of coal tar.

R. W. Sievier, gent., Upper Holloway, Middlesex, for improvements in the means of warping and weaving plain and figured fabrics.

J. E. Asaert, of Lille, in the republic of France, mechinist, for improved means of obtaining motive power.

DESIGNS FOR ARTICLES OF UTILITY REGISTERED.

J. Marr, J. Gallie, and Co., London, Edinburgh, and Dublin, scrip type.

Welch and Margetson, Cheapside, a poncho wrapper.

G. F. Bowers, Brownhills, Staffordshire; T. Bettency, Longton, Staffordshire; E. Chaliner, Tunstall, Staffordshire, magnetic slips and glaze troughs.

J. Presland, Charlotte-street, Blackfriars-road, hatband.

A. Chaplin, Limehouse, smiths' portable furnace.

G. Fitt, Bishopsgate, package for lard.

W. Middleton, Birmingham, springs for buffers and drawbars of railway carriages.

John and James Mc. Rae, Ave Maria-lane, inkstand.

W. and T. Avery, Birmingham, weighing machine.

Capper and Waters, Regent-street, tasca collar.—*Mechanics' Magazine.*

Current Prices of Stocks, Shares, & Metals.

STOCK EXCHANGE, Saturday morning Eleven o'clock.

Bank Stock, 7 per Cent., 183	Belgian, 4½ per Cent., 71
3 per Cent. Reduced Ann., 83¾ ⅞	Dutch, 2½ per Cent., 44½
3 per Cent. Consols Ann., 84⅞ ⅞	Brazilian, 5 per Cent., 71
3¼ per Cent. Ann., 84¾ 4	Chilian, 6 per Cent., 83¾
Long Annuities, 8⅝	Mexican 5 per Cent., 19¾
India Stock, 10½ per Cent., 237	Russian, 5 per Cent., 98
3 per Cent. Consols for Acct. 84⅞ ⅞	Spanish, 5 per Cent, 11
Exchequer Bills, 1000*l.* 2d. 35 32 36 pm.	Ditto 3 per Cent., 22½

Mines.—The mining share market, during the week, has not maintained that position which we anticipated from the actual business transacted during the previous 10 or 12 days. We, therefore, attribute this apparent suspension of active measures to a mere temporary cause; for we cannot reconcile ourselves to the impression that, with a general improvement in our mines, as well as in the metal markets, any continued dulness in the demand for shares, at present rates, can exist when the sole cause of the late depression is departing. We noticed on the 7th an advance of 2*l.* per ton on tin; our quotations show another advance this week of 2*l.* per ton; and refined copper is on the rise. Lead continues much the same, the demand for home consumption being well maintained.

Devon Great Consols have been done at our last quotation, and at an advance. Seton, North Pool, and Stray Park have been in request, but we are not advised of business having been done in any but the latter.

Shares in the following mines have changed hands during the week—viz.: Devon Great Consols, East Wheal Rose, West Caradon, Mary Ann, Stray Park, Herodsfoot, Tregordan, Trehane, Trethellan, Camborne Consols, Tamar, East Pool, Trelawny, &c.

Camborne Consols Mines are looking well, and represented to improve daily. Certain difficulties, unconnected with the prospects of the mines, having been settled to the satisfaction of all parties, and the few shares, which were originally obtained at a mere nominal price, having gone into other hands, we do not expect any can be obtained under present quotations.

Wheal Seton adventurers held their two-monthly account on Tuesday, the 10th, when a dividend of 10*l.* per 99th share was declared. The financial statement shows a profit of 893*l.* 8s. 6d. on July and August workings, which, added to the balance of last account, gives 1449*l.* 1s. 4d., and, after payment of the dividend, a balance of 459*l.* 1s. 4d. is carried to the next account. The agents' report of the mine is of the most satisfactory character; the 90, 80, and 60 fm. levels, and the winze sinking below the 80, are each producing 8 tons of ore to the fathom; the stopes in the backs of the 70 and 80 are each producing 20 tons to the fm.; the 70 is turning out 10 tons; the stopes in the back of the 60, 15 tons; and the winze below this level, 8 tons to the fm.; whilst the other parts of this highly-productive mine are looking remarkably well.

The bi-monthly meeting of the shareholders in South Wheal Tolgus was held on Tuesday, the 10th, when the statement of accounts presented a balance of 137*l.* 7s. 3d. against the adventurers; the actual loss on the two months' working appears to be 73*l.* 13s. 6d. The prospects of this mine are highly favourable; and the agent's report calculates returning, for the current two months, about 700*l.* worth of ore. The present depth is only 22 fms.; the shaft is in course of sinking to the 32.

Stray Park and Camborne Vean Mines' two-monthly account was held on Friday, the 13th. The statement of accounts showed a profit of 302*l.* 19s. 7d. on July and August workings; the balance in hand amounts to 631*l.* 8s. 2d., with the copper ore bill for ores sold, on the 5th, of 2221*l.* 13s. 5d. The captain's report is very satisfactory and encouraging; all the ends are, with one exception, productive, and a material improvement is anticipated in the 90, going west. The pitches throughout the mines are looking well; and 500 tons are expected for the next sampling. The circular reporting the meeting, furnished to the shareholders, is highly creditable to the purser, who invariably gives a detailed tabular statement of the expenditure of the mines, as well as a list of prices paid for materials supplied, which must prove highly pleasing and satisfactory to distant shareholders.

Our advice has frequently been requested as to the outlay of capital in mining property, and, however cautious we may be in responding to such applications, we invariably represent the advantages arising from dividend-paying mines for *investment*, and those on the eve of doing so, together with a careful perusal of the agents' reports to the adventurers at their periodical meetings, which may be considered as correct information, and generally acted upon with safety; but for *speculation* there are ample opportunities to expend money in the numerous new adventures that are constantly brought before the public—not that all are worthy of attention, still, if all new mines are suffered to want patronage, old mines may be worked out, and there will be none to succeed them. But as to those we advertise we are in no way responsible; the parties themselves, and the agents who report thereon, are alone answerable for the correctness of the opinions submitted.

In foreign shares, the transactions have been limited; we have to notice the following transactions:—Australians, Copaipo, United Mexican, Bolanos, St. John del Rey, Imperial Brazilian, and Mexican and South American.

The following numerous arrivals of specie have taken place in the port of London—viz.: ex *American Eagle*, from New York, with three packages of specie; *Oriental Queen*, from the Mauritius, one case of bullion; the *Tourist*, from Calais, one bag of gold; the *Inchinman*, from Calcutta, four cases of specie; the *Crusader*, from Bahia, one bag of silver coin; the *Pauline Houghton*, from Bahia, two cases of specie; the *Doris*, from the Mauritius and Cape of Good Hope, one box of silver coin, and five cases of specie; the *Athenian*, from Madras and the Cape, one case of specie; the *Anglo Saxon*, from Havannah, one box of silver; *Sir Robert Peel*, from New York, one keg of specie, and twenty packages; *Mary Nixon*, from Madras, one case of treasure; the *Lucinda*, from Bombay, one box of specie; the *Greyhound*, from the Cape of Good Hope, two boxes of specie; the *Scottish Maid*, from Valparaiso, six mats of bar silver; the *Wilson Wood*, from Monte Video, one box; the *London*, from Madras, six kegs of specie; the *Daphne*, from Bordeaux, one case: the *Carlista*, from Belize, one package of coin; the *John Brewer*, from Bombay, one box of specie; the *Prince Albert*, from New York, three packages; the *Circassian*, from Cadiz, nine packages, and two bags of specie; the *Westminster*, from New York, one case of gold, and one package of specie; the *Belfast*, from Calais, one bag of coin; the *Samuel Enderby*, from the Mauritius, two cases of bullion, and four packages; the *Nautilus*, from the Mauritius, one box of specie; the *Standerings*, from Algoa Bay, two cases of specie; and the *William and Sarah*, from Oporto, with 11 cases of specie, consigned to the Bank of England.

HULL, Thursday.—Since our last the share market has presented more firmness, which may, in some degree, be attributed to the promised statement of accounts made by the London and North-Western Company, in refutation of recent attacks upon railway property generally. During the last few days there has been rather more inquiry for North British stock.—Local stocks without alteration.

RAILWAY TRAFFIC RETURNS.

Name of Railway.	Lgth. Rway.	Present actual cost.	Price per share	Last Div.	Traffic Returns. 1848	1847
Belfast and Ballymena	37¾	—	—	—	£680	£—
Birkenhead, Lancashire, & Chesh.	19	997,284	37	5p.c.*	928	836
Caledonian	141	3,993,732	17¾	—	5011	—
Chester and Holyhead	84	3,014,062	19	—	1879	—
Dublin and Drogheda	35½	774,875	28	—	801	861
Dublin and Kingstown	7½	395,915	—	6	863	856
Dundee, Perth, & Aberdeen Junc.	47½	544,554	25	8	1216	—
East Anglian (Lynn to Ely)	67½	1,167,104	4½	—	865	—
East Lancashire	44	1,733,915	13½	5	1616	947
Eastern Counties and Norfolk	307	10,364,505	12½	4	17172	14082
Eastern Union	50½	1,522,232	20	—	1402	1244
Edinburgh and Glasgow	57½	2,556,889	37½	6	4137	3692
Edinburgh and Northern	78	1,722,213	15½	4*	2077	723
Glasgow, Paisley, and Ayr	102½	2,286,353	60	—	2721	2953
Glasgow, Paisley, & Greenock	22½	848,328	14½	—	989	1117
Gt. Southern & Western, Ireland	131	2,844,897	20½	4*	—	1744
Great Western	290¾	11,311,069	70½	7	21201	20191
Kendal and Windermere	10½	174,600	23	—	179	153
Lancaster and Carlisle	70	1,476,102	40	4	2520	1531
Lancashire and Yorkshire	172½	8,242,628	57-8	6	11537	10782
London and North Western	435	22,835,120	102-½	7	44153	43505
London and Blackwall	4	1,299,675	4	1-12	804	902
London, Brighton, & South Coast	162½	6,284,812	25½	2½	10506	11034
London and South-Western	215	7,139,733	36½	6	10943	9412
Londonderry and Enniskillen	14½	154,643	16	—	129	112
Manchester, Sheffield, & Lincolnsh.	58	4,651,093	47	5	2927	2238
Maryport and Carlisle	28	443,974	40	—	—	557
Midland Company	463½	13,254,006	71	6	23857	25027
Midland Great Western (Irish)	50	725,332	10½	4*	1290	824
North British	99	3,163,450	13	5	2643	2423
Scottish Central	45½	1,245,496	22	—	1254	—
Shrewsbury and Chester	23	780,272	11½	5	869	627
South Devon	50½	1,789,351	12½	—	1519	948
South-Eastern	165½	7,389,322	21	6½	11301	113
Taff Vale	38	820,056	125	6	2058	1533
Ulster	36	684,684	45½	4	822	850
Whitehaven Junction	12	150,879	9½	3	201	180
York, Newcastle, & Berwick	269	5,038,255	27½	8	13953	12010
York and North Midland	255	4,179,309	45	8	10003	10396

FOREIGN RAILWAYS.

Name of Railway.	Lgth. Rway.	Present actual cost.	Price per share	Last Div.	1848	1847
Amiens and Boulogne	76½	573,338	5½	4	1520	—
Antwerp to Ghent (monthly)	31	—	—	—	—	—
Marseilles to Avignon	71½	—	8½	—	—	—
Dutch Rhenish	57½	—	½	—	1054	1074
Northern of France	211	2,000,000	6½	4	—	14912
Orleans to Bourges (Central)	107½	—	—	—	2262	2486
Orleans to Tours	72	600,000	32½	4	3156	4272
Paris and Orleans	82	2,011,720	25½	12½	8619	10588
Paris and Rouen	85	2,082,916	15½	11½	6740	7609
Rouen and Havre	59½	—	7½	—	2680	2820
Strasburgh and Basle (monthly)	88	—	6	1½	—	—
West Flanders (ditto)	—	—	½	3	1120	—

* Interest.—Total for last week, £219,083, being an increase of £24,168 over last year.

PRICES OF MINING SHARES.

BRITISH MINES.

Shares.	Company.	Paid.	Price.
1000	Abergwessin	7	—
512	Albert Consols	1	2½
1024	Alfred Consols	4½	5
235	Andrew and Nangiles	28½	5
1000	Antimony and Silver-Lead Mining & Smelting	5	6½
1024	Ashburton United Mines	8½	10
1624	Balleswidden	9	18
128	Balnoon Consols	25	25
10000	Banwen Iron Co.	6	6½
1000	Barristown	4½	1
4000	Bedford	2½	2
1244	Birch Tor Tin Mine	9½	1½
8000	Blaenavon	50	17½
100	Botallack	175	60
120	Brewer	5	7
10000	British Iron, New, regis.	10	13
—	Ditto ditto, scrip	10	10
128	Budnick Consols	52½	35
128	Callestock	17	10
1000	Callington	19	15
1000	Camborne Consols	5	7
20000	Cameron's Steam Coal	6	1
256	Caradon Copper Mine	9½	2
256	Caradon Mines	22½	10
256	Caradon United	24	5
256	Caradon Wh. Hooper	21	8
1000	Carn Brea	15	95
3000	Carthew Consols	1½	5
2048	Cascade	1	—
112	Charlestown	220	60
512	Coatlithe Hill	½	1
500	Comblawn	5½	6
128	Comfort	45	37
256	Condurrow	20	40
2560	Cook's Kitchen	14	2
1000	Coombe Valley Quarry	3½	4½
6500	Cornish Mining Co.	2	2⅝-¾
20000	Cornwall New Mining	1	1
1000	Copper Bottom	1½	6½
1024	Cosheen	4½	20
225	Craddock Moor	16½	5
128	Creeg Braws	120	100
500	Cubert Mine	12½	10
1000	Cwm Erfin	3½	1½
300	D. Prior & Buckfastleigh	14	26
7100	Derwent	8½	5
845	Devon & Courtenay Con.	7½	2
1024	Devon Great Consols	1	200
1000	Dhurode	2	5
186	Dolcoath	30	15
2560	Drake Walls	4	4
10000	Durham County Coal	45	9
3000	Dyfngwm	10	12½
512	East Alvenney	5½	12½
112	East Caradon	47	47
2048	East Crowndale	5½	2½
512	East Combe Silver-Lead	6½	6½
128	East Pool	5	20
100	East Relistian	22	40
9000	East Tamar Consols	½	½
—	East Wheal Albert	1	3
94	East Wheal Crofty	125	250
1024	East Wheal Fortune	2	3
1024	East Wheal Friendship	3	3½
128	East Wheal Rose	50	700-25
—	East of Scotland Iron Co.	5	1½
123	East Wheal Seton	14	10
256	Exmoor Wh. Eliza	5	8-10
512	Fowey Consols	40	45
1024	Freidd Llwydd Mines	1½	3½
6400	Gadair	2	2
20000	Galvanised Iron Co.	10	1½
4000	Gen. Mining Co. for Irel.	1½	1½
2048	Goldscope Mine	2	2
256	Gonamena	34	5
128	Goonvrea	4	2
100	Great Consols	1000	400
1600	Great Michell Consols	1½	½
256	Great Resugga Moor	11	6
512	Gt. Wh. Rough Tor Con.	18½	16
1200	Growa Slate Company	5	5
256	Gwinear Consols	7	3
6000	Heignston Down Con.	—	2½
256	Herodsfoot	18	25
10000	Hibernian	12½	1½
239	Hobb's Hill	6	1½
1000	Holmbush	19	1½
827	Kirkcudbrightshire	5½	2
2048	Lamherooe Wh. Maria	11	1
128	Lelant Consols	90	60
160	Levant	—	120
1000	Lewis	15	5½
1000	Llwyn Malees	7	7
3600	Llynvi Iron	50	50
256	Lostwithiel Consols	15	15
6000	Marke Valley	10	2
5000	Mendip Hills	2½	1
5000	Merionethshire Slate Co.	1½	2
128	Metha	34	—
20000	Mining Co. of Ireland	7	4½
256	New East Crowndale	3½	2½
128	North Fowey Consols	37	10
100	North Pool	45	400
140	North Roskear	5½	165
262	North Wh. Leisure	1½	2
15000	Northern Coal Co.	23	2
128	Par Consols	—	1009
8000	Pennant & Craigwen	2	—
100	Penrhiw	30	65
1024	Penzance Consols	16s 3d.	2
1280	Perran St. George Un.	13	20
128	Perran Wh. Virgin	9½	10
512	Plymouth Wh. Yeoland	6½	15
256	Polsaith Consols	4½	4½
2500	Rhoswiddol & Bacheldon	10	10
10000	Rhymney Iron	50	13
10000	Ditto New	7	6½
1000	Rosewall Hill	1	5
256	Rosewarva Mines	—	12

BRITISH MINES—*continued.*

Shares.	Company.	Paid.	Price
128	South Caradon	10	350
1100	South Dolcoath	4	4
256	Sth. Friendsh. Wh. Ann	20	4
256	South Molton	5	8-10
256	South Tolgus	10	55
256	South Trelawny	20	8
128	South Wheal Basset	110	120
256	South Wh. Betsey	2½	12½
124	South Wh. Frances	160	215
1000	South Wh. Maria	2½	1½
10000	Southern & Western, Irish	2	4
280	Spearne Moor	30	40
256	St. Austell Consols	9	—
94	St. Ives Consols	—	320
128	St. Michael Penkivel	5	10½
999	St. Minver Consols	1	6
1000	Stray Park	43	17
9600	Tamar Consols	3	5
1024	Tavy Consols	4	8
6000	Tincroft	7	3½
1000	Tin Vale	2½	3½
128	Tokenbury	152½	13
256	Tollpetherwin	3½	5
256	Tregordian	1	9
256	Trehane	2½	26½
5000	Treleigh Consols	6	2
2000	Trenance	3	18
96	Tresavean	10	210
120	Trethellan	5	19
120	Treviskey and Barrier	130	85
258	Trevean	1½	5
100	United Mines	300	350
256	Wellington Mines	15	10
128	West Basset	45	7
256	West Caradon	20	70
128	West Cargoll	2	12
512	West Fowey Consols	40	15
256	West Providence	9	12
200	West Seton	40	200
—	West of Scotland Iron Co.	240	90
120	West Trethellan	5	30
256	West United Hills	—	4½
512	West Wheal Frances	1½	2
256	West Wh. Friendship	9	8
3725	West Wheal Jewel	11	1½
256	West Wheal Tolgus	21½	5
256	West Wheal Treasury	19	8
5200	Wicklow Copper	5	8½
184	Wheal Adams	51	10
1000	Wheal Agar	—	8
256	Wheal Albert	10	1
256	Wheal Allen	2	5
300	Wheal Anderton	23	15
128	Wheal Ann	—	50½
512	Wheal Anna Maria	6½	8
1024	Wheal Ash	4½	8
120	Wheal Bal	5½	20
2560	Wheal Barbara	1½	—
256	Wheal Blencowe	21	5
256	Wheal Bucketts	20	5
256	Wheal Calstock	5	10
136	Wheal Clifford	190	50
1024	Wheal Coad	½	12½
268	Wheal Courtenay	12½	15
256	Wheal Fortescue	6½	3
388	Wheal Franco	27	18
128	Wheal Harriet	45	50
256	Wheal Jane	21	15
1024	Wheal Lawrence	2½	6
112	Wheal Margaret	79	250
512	Wheal Mary Ann	5	14½
237	Wheal Mary Consols	42½	5
—	Wheal Penhale	—	12
210	Wheal Prospect	4	7
120	Wheal Reeth	41	150
128	Wheal Rose	60	5
99	Wheal Seton	214	650
194	Wheal Sisters	32½	12
512	Wheal Sophia	3½	5
128	Wheal Spearne	10	75
128	Wheal St. Ann	30	35
550	Wheal Trescoll	3	10
260	Wheal Trelawny	7½	55
256	Wh. Tremaine (St. Ervan)	9½	2½
1024	Wheal Tremayne	35	1½
92	Wheal Tryphena	140	265
1000	Wheal Vincent	1½	5
256	Wheal Vlow (Perranz.)	2½	—
184	Wheal Vyvyan	—	60
250	Wheal Williams	28½	5
1024	Whiddon Mines	4½	4½

FOREIGN MINES.

Shares.	Company.	Paid.	Price
5000	Alten Mining Company	14½	2½
15000	Asturian Mining Co.	13	2½
20000	Australian	2½	4½
10000	Anglo-Mexican Co	100	1
12374	Ditto Subscription	25	1½
6000	Barossa Range	½	1
3000	Bolanos	150	2½-1
2000	Ditto Scrip	15	3
12000	Brazilian Imperial	23	4½
10000	Cobre Copper Co.	40	13½
10000	Copiapo Mining Co	14	2-1½
10000	General Mining Ass'n.	20	11
5000	Kinzigthal Mining Ass.	2	3
20051	Mexican Company	59	—
2000	Mexican & South Amer.	8	3
5000	National Brazilian	30	3½-5½
100000	N. Brit. Australasian	1	1
29320	Rl. del Monte, regis. / Ditto unregistered	28½	8
	Ditto Red Debentures	—	4
	Ditto Black ditto	—	1-1½
	Ditto Loan Notes	150	12
7000	Royal Santiago	10	4
11000	St. John del Rey	15	7½
43174	United Mexican	Av. 28½	3½

LATEST CURRENT PRICES OF METALS.

LONDON, OCTOBER 20, 1848.

	£	s.	£	s.	d.
Iron—Bar *a*.. Wales .. *ton*	5	10—	5	19	0
,, .. London	0	0 —	6	15	0
Nail rods ,,	0	0—	7	10	0
Hoop (Staf.) ,,	0	0—	9	0	0
Sheet ,, ,,	0	0—	9	10	0
Bars, Staffordshire	0	0—	6	10	0
Pigs, ditto	3	0..	3	15	0
Welsh cold-blast foundry pig	3	15—	4	5	0
Scotch pig *b*, Clyde	2	1—	2	4	0
Rails, average	5	10—	5	15	0
Chairs	0	0 —	4	0	0
Russian, CCND *c*	0	0—17		0	0
,, PSI	0	0—	—		
,, Gourieff	0	0—	—		
,, Archangel	0	0—13		0	0
Swedish Steel, fagt. *d*	0	0—15		0	0
,, kegs *e*	13	10—14		0	0
Copper—Tile *f*	0	0—78		10	0
Tough cake	0	0—79		10	0
Ordin. sheets, *lb.*	0	0—	0	0	9
Copper—Old	0	0—	0	0	7½
Yellow Metal Sheathing	0	0—	0	0	7½
Tin—Com. blocks *g*.. *cwt.*	0	0—	3	17	0
,, bars	0	0—	3	18	6
Refined	0	0—	4	1	0
Straits *h*	3	12 6	3	14	0
Banca	0	0—	3	15	0
ditto for arrival	0	0—	—		
Tin-Plates—Ch., IC *i*, *box*	1	9—	1	10	0
,, IX	0	0—	1	15	0
Coke, IC	1	6—	1	7	0
Lead—Sheet *k* .. *ton*	17	0—17		5	0
Pig, English	16	0—16		5	0
,, Spanish, in bd.	15	0—16		0	0
Red	0	0—18		5	0
Dry White	0	0—22		15	0
Shot (Patent)	0	0—19		5	0
Spelter—(Cake) *l* on spot	14	0—14		5	0
For arrival	0	0—	—		
Zinc—(Sheet) *m* export.	0	0—	20	0	0
Quicksilver *n* .. *lb.*	0	0—	0	3	6

a Discount 2½ per cent. *b* Net cash. *c* Discount 2½ per cent. *d* Ditto
e In kegs ½ and ¼-inch. *f* Discount 3 per cent. *g* Ditto 2½ per cent. *h* Net cash.
in bond. *i* Discount 3 per cent. *k* Ditto 2½ per cent. *l* Net cash.
m Discount 1½ per cent. *n* Discount 1½ per cent.

[From our Correspondents.]

GLASGOW PIG-IRON TRADE, Oct. 19.—In pig-iron there has been a falling off in the demand during the last week, and the consequence is, that sellers have become more numerous, and are submitting to lower prices. The transactions have been very few, as lower prices are anticipated. The price of mixed Nos. may be quoted to-day at 42s. to 42s. 6d., cash.

—The production of pig-iron this year is generally allowed to be fully as much, and some people think greater, than the corresponding months of last year—and the demand is about equal to the production, notwithstanding the general dullness of trade. During the last three or four months the price of pig-iron has remained very stationary—not having varied more than 2s. to 3s. per ton. The bar-iron trade continues steady, and there is a tolerable good demand for merchant iron.

Exportation of Minerals, Metals, &c.—We extract the following particulars from the returns of the Board of Trade, for the month ending Sept. 5, issued during the past week:—

	1847.	1848.	Increase.	Decrease.
Coals and culm	£103,801	£96,393	—	£7,408
Glass	26,458	17,661	—	8,797
Hardwares and cutlery	213,237	160,001	—	53,236
Machinery	162,552	100,729	—	61,823
Iron and steel	550,105	485,139	—	64,966
Copper and brass	90,059	106,081	£16,022	—
Lead	18,756	12,123	—	6,633
Tin, unwrought	13,687	17,154	3,467	—
Tin-plates	47,908	52,302	4,394	—
Salt	18,989	28,819	9,830	—

IMPROVEMENT IN THE METAL TRADE.

It is with much pleasure we can again record a further advance of 2*l.* per ton in the price of tin, and evident symptons of great impovement in the demand for copper. Notwithstanding our London quotations vary but little from those of last week, sales in copper have taken place in the Liverpool market at an advance of 3*l.* per ton; and we believe, from information from numerous correspondents, that there is every prospect of a still further increase. The metal market generally is evidently approaching a more healthy state; and there appears good ground for reasonable hopes that the year 1849 will open with more cheering prospects than has marked the one now approaching its termination—one which has been pregnant with such fearful changes in national economy, and such severe commercial depression in all the European states.

LEAD ORES.

Sold at Holywell.

Mines.	Tons.	Price.	Purchasers.
Talargoch	88	£9 2 6	Walker, Parker, & Co.
ditto	15½	9 13 0	J. P. Eyton.
ditto	21	9 11 0	ditto
Milwr	16	9 17 0	Newton, Keates & Co.
ditto	2	9 5 6	Walker, Parker, & Co.
Hendre	62	9 13 0	J. P. Eyton.
Pary's Mine	5	9 1 0	Newton, Keates, & Co.
Fronfownog	100	9 12 6	Walker, Parker, & Co.
ditto	100	9 12 6	ditto
Deep Level	80	9 5 6	Newton, Keates, & Co.
Newtonard's	60	8 18 0	J. P. Eyton.
Sardinia	12	8 11 6	Newton, Keates, & Co.
Total tons	561½.		
Sold on the Mine.			
East Wheal Rose	75	£11 5 0	R. Michell & Son,
ditto	57	11 8 0	Tamar Company.
ditto	43	11 6 6	ditto
Total tons	175.		
Sold at Bagillt.			
Cairnsmore	40	£9 0 0	Newton, Keates, & Co.
Sold at Aberystwith.			
Goginan	25	£13 2 0	Sims & Co.
ditto	75	13 5 6	ditto
Frongoch	86	8 12 0	ditto
Total tons	186.		
Sold in London.			
Tamar	92	£16 16 6	T. Somers.

BLACK TIN.

Mines.	Tons.	Amount.	Purchasers.
Plymouth Wh. Yeoland	4½	34 0 0	Calenick Smelting Co.
ditto	½	25 5 0	ditto

Sold on the 12th October to the Mellanear Smelting House.

Mines.	Tons cwt. qrs. lbs.	Price per ton.	Amount.
Wheal Tremayne	6 2 1 15	£40 2 6	£245 10 7
ditto	4 4 3 13	47 10 0	201 11 1
ditto	0 15 2 22	41 0 0	32 3 6
ditto	0 10 3 8	44 0 0	23 16 1
	11 12 3 2		£503 1 3
Carriage			5 16 10
Making a total of			£508 18 1

COPPER ORES.

Sampled Oct. 4, and Sold at Andrew's Hotel, Redruth, Oct. 19, 1848.

Mines.	Tons.	Price.	Mines.	Tons.	Price.
Devon Gt. Cons. Wh. Josiah	94	£4 19 6	West Caradon	78	£6 12 6
ditto	86	6 9 6	ditto	65	6 18 0
ditto	65	7 5 0	ditto	38	11 9 0
ditto	63	7 8 6	ditto	34	12 4 0
ditto	59	6 11 0	ditto	28	4 0 6
ditto	57	6 5 6	Wh. Friendship	81	6 1 0
ditto	56	7 3 0	ditto	79	8 5 0
ditto	43	5 16 6	ditto	65	7 17 0
ditto	39	5 5 6	Fowey Consols	74	5 6 6
Wh. Fanny	96	5 3 0	ditto	73	6 3 6
ditto	84	5 0 6	ditto	72	5 18 6
ditto	78	5 10 0	Marke Valley	76	3 18 6
ditto	75	4 13 6	ditto	71	3 8 6
ditto	64	3 9 6	ditto	21	2 12 6
ditto	61	4 18 6	Bedford United	103	5 0 6
ditto	42	5 1 6	Wh. Pink	65	5 12 6
ditto	24	1 18 6	Phœnix Mines	44	7 17 0
Wh. Maria	88	4 18 0	Wh. Penhale	33	6 18 0
ditto	41	3 15 6	Holmbush	28	4 8 6
Wh. Anna Maria	85	5 15 6	Wh. Speed	6	3 9 6
ditto	67	5 8 6	Owen Vean	4	4 10 6

TOTAL PRODUCE.

Mines.	Tons.	Amount.	Mines.	Tons.	Amount.
Devon Gt. Cons. Wh. Josiah, Wh. Maria, Wh. Fanny, Wh. Anna Maria	1367	£7482 17 6	Marke Valley	168	£568 4 0
			Bedford United	103	517 11 6
			Wh. Pink	65	365 12 6
			Phœnix Mines	44	345 8 0
West Caradon	243	1927 17 0	Wh. Penhale	33	227 14 0
Wh. Friendship	225	1652 1 0	Holmbush	28	123 18 0
Fowey Consols	219	1271 8 6	Wh. Speed	6	20 17 0
			Owen Vean	4	18 2 0

Average Standard .... £84 13 0 | Average Produce 10½
Average Price per ton £5 16 0
Quantity of Ore .... 2505 tons. | Quantity of Fine Copper, 252 tons 18 cwts.
Amount of Money £14,521 11 0
LAST SALE.—Average Standard .... £88 4 0.—Average Produce 9½

COMPANIES BY WHOM THE ORES WERE PURCHASED.

	Tons.	Amount.
Mines Royal	65	£365 12 6
Vivian and Sons	598	3419 0 3
Freeman and Co.	399	2123 11 0
P. Grenfell and Sons	345	1734 12 6
Sims, Willyams, and Co.	472	2962 18 0
Williams, Foster, and Co.	541	3450 17 3
Schneider and Co.	82	464 19 6
Total tons	2505	£14,521 11 0

Copper ores for sale on Thursday next, at Farquharson's Hotel, Truro.—Mines and Parcels.—United Mines 1053—Par Consols 290—Wheal Comfort 225—South Caradon 224—Tresavean 210—West Wheal Jewel 70—Wheal Brewer 25—West Trethellan 24—Treffry's regulus and copper 21—East Downs 15—North Downs 8.—Total, 2165 tons.

Copper ores for sale on Thursday week, at Andrew's Hotel, Redruth.—Mines and Parcels.—North Roskear 1000—Consolidated Mines 593—North Pool 537—Wheal Seton 287—Tincroft 260—Fowey Consols 255—Creeg Braws 200—South Roskear 185—South Wheal Frances 106—South Wheal Basset 95—Wheal Bucketts 61—Wheal Vyvyan 27—Wheal Harriet 30.—Total quantity of ore to be sold, 3626 tons.

COPPER ORES

Sampled Sept. 27, and Sold at Swansea, Oct. 19, 1848.

Mines.	Tons.	Prod.	Price.	Mines.	Tons.	Prod.	Price.
Cobre	129	14½	£8 15 6	Cuba	58	22½	£14 12 0
ditto	120	14½	8 15 0	ditto	56	22½	14 6 0
ditto	114	14½	8 14 6	Berehaven	124	11	7 4 6
ditto	96	14½	8 11 6	ditto	100	9½	6 0 6
ditto	124	14½	8 15 6	ditto	99	10½	6 14 6
ditto	121	14½	8 13 0	ditto	91	10	6 5 0
ditto	56	14½	9 1 6	Knockmahon	105	8½	5 6 0
ditto	53	15	9 2 6	ditto	67	10½	6 7 6
ditto	80	24½	15 14 6	ditto	49	5½	3 10 0
ditto	62	24½	15 17 6	ditto	44	11½	7 7 6
ditto	58	24½	15 19 6	Chili	60	52½	31 10 0
Santiago	116	13½	8 7 6	ditto	59	52	32 10 0
ditto	105	13½	8 9 0	ditto	58	52½	30 2 0
ditto	96	13½	8 7 0	ditto	33	52	31 2 0
ditto	36	13½	8 1 6	Burra Burra	70	24	16 12 6
Cuba	101	13	8 2 0	ditto	60	29½	21 1 0
ditto	87	13½	8 7 0	ditto	53	30½	21 17 6
ditto	81	13	8 4 0	Ballymurtagh	37	3½	2 1 0
ditto	69	13½	8 6 0	ditto	23	6½	4 1 6

TOTAL PRODUCE.

Mines.	Tons.	Amount.	Mines.	Tons.	Amount.
Cobre	1013	£10295 4 0	Knockmahon	265	£1479 12 6
Santiago	353	2951 1 0	Chili	210	6579 12 0
Cuba	452	4429 1 6	Burra Burra	183	3586 2 6
Berehaven	414	2732 18 6	Ballymurtagh	60	169 11 6

COMPANIES BY WHOM THE ORES WERE PURCHASED.

	Tons.	Amount.
English Copper Company	37	£75 17 0
Freeman and Co.	240	2344 0 0
Grenfell and Sons	291	2067 3 6
Sims, Neville, and Co.	320	4218 16 0
Vivian and Sons	692	9283 4 0
Williams, Foster, and Co.	1234	11718 0 0
Schneider and Co.	136	2546 0 0
Total tons	2950	£32,324 [illegible]

Copper ores for sale Nov. 2.—Cobre 119, ditto 115, ditto 110, ditto 107, ditto 105, ditto 103, ditto 101, ditto 90, ditto 79, ditto 60.—Berehaven 121, ditto 102, ditto 94, ditto 89, —Chili 56, ditto 55, ditto 54, ditto 53, ditto 61, ditto 60.—Kapunda 65, ditto 60.—Knockmahon 93.—Laxey 64.—Burra Burra 57.—Lackamore 24.—Aberdovey 22.—Crousheen 2.—Tigroney 2.—Total quantity of ore to be sold, 2128 tons.

NOTICES TO CORRESPONDENTS.

*** We should feel obliged to all purscrs captains, or adventurers, to forward particulars of meetings, &c., of the mines with which they may be connected, on the earliest opportunity, that they may be published in the Journal with as little delay as possible.

New Bearing Metal.—In answer to the inquiry, in last Journal, from an Exeter correspondent, requesting information on the subject of a bearing metal, heating less easily than common bearing metal, we are requested to state, that all particulars regarding price, wear and tear, &c., can be obtained on application to Messrs. Garden and Macandrew, Queen-street, Cheapside. We expect to be able to publish a full description of the metal referred to in an early Number.

"M. F." (Bangor).—We are obliged to "M. F." for his communication; but we fear we shall be always open to some such complaints. The numerous correspondents to whom we are necessarily dependent, abroad and at home, for a great portion of the information we weekly dispense, renders it next to impossible to test the *literal* accuracy of all they furnish—though, as far as we can, such is carefully studied before publication.

The Conway Tubes.—In the Journal of last week, referring to the two tubes of the Conway Bridge, we stated that the *lifting*, and not the *floating*, of the second tube had taken place, whereas the latter was the fact; they are totally distinct operations, and when the former is accomplished, the difficulties are considered at an end.

"C. H." (Huddersfield).—We should feel obliged if our correspondent would favour us with a communication, on the subject of his note, for publication.

"T. B." (Buckfastleigh) shall receive a letter in a day or two.

"R. B." (Covent-garden).—We shall avail ourselves of some of the information contained in the letters when an opportunity offers—possibly on the arrival of our next dispatches from the colony. However, we should be glad to receive an original communication, such as that alluded to, if "R. B." has time to prepare one.

(?) shall have the information in next Journal.

Erratum.—In our article, in last week's Journal, descriptive of Mr. Osborn's improved system of steam ploughing, from the 20th line, *should read*—"Another trial was made, extending the distance to 210 yards between the engines, when, with both a Kentturn rest and an Essex two-wheel plough, very good work was accomplished. The subsequent trials were made with a single engine—the wire-rope being returned through a pulley, anchored opposite the engine, and were equally successful as regards the work done."

We must impress upon our correspondents, the necessity of invariably furnishing us with their names and addresses; not that their communications should, consequently, be noticed, but as an earnest to us of their good faith.

THE MINING JOURNAL

Railway and Commercial Gazette.

LONDON, OCTOBER 21, 1848.

The Mining Journal is published at about Eleven o'clock on Saturday morning, at the office, 26, Fleet-street, and can be obtained, before Twelve, of all news agents, at the Royal Exchange, and other parts of London.

The weather has, during the past week, presented to our feelings unmistakeable symptoms of the approach of winter; and when we call to mind the position of a very large amount of population—that vast proportion who cannot otherwise obtain the commonest necessaries of life, but by incessant daily labour—and the present very generally depressed state of trade and manufactures, the prospect before us is gloomy in the extreme. If we can scarcely look forward to the position of our own labouring and mining population, during the ensuing four or five months, with the hope of general improvement taking place, and thus ameliorating their condition, with what sentiments shall we anticipate the probable circumstances attending the poor of Ireland during the ensuing winter? A large majority of the people without chance of employment, land proprietors and householders, large and small, taxed to the amount of half their rental towards the support of the poor, small tenants and their families being turned out of house and home, wretched, destitute wanderers, the peasantry burning with rancour towards their oppressors, and just struggling out of incipient rebellion, and only kept within bounds by the bayonet of the soldier and policeman, present to the mind's eye the prospect, during the cold horrors of winter, of desolating misery, destitution, starvation, and death. An onerous degree of responsibility rests on the Government of this unhappy, though fertile and prolific, land; and while leaving them to devise schemes for promoting a wide change in the public policy of Ireland, it behoves the Irish landholder, the wealthy, the influential, and all who can render the most trifling aid, to put their shoulders to the wheel, and adopt every possible measure in all the districts of Ireland to mitigate, as far as human aid can effect it, the bitter misery which, in all probability, is now beginning to be felt in that ill-used country.

Is is with much gratification we observe that a meeting of the nobility and gentry has just been held at Ballinasloe, to consider the best means to be adopted, for extending the Irish Great Western Railway, as a great arterial line into the county and to the city of Galway, and thus provide reproductive employment for a large portion of the midland districts of Ireland. The Earl of Clancarty expressed his conviction that great advantages would result from this extension not only to the provinces of Connaught and Leinster, but to the entire kingdom. The Marquis of Sligo not only concurred in this view, but expressed his opinion that every man of whatever grade, high or low, rich or poor, but more particularly the wealthy and influential, and those who drew their incomes from the soil, should exert themselves to the utmost of their power, connections, and ability, to promote this, and every other means of giving reproductive employment to the peasantry, and eventually bringing about the regeneration of Ireland. We hail these expressed convictions of two Irish noblemen, who are always foremost in any measures for the good of their country, and the advance ment of the population, as a bright star in Ireland's future horizon They have been assiduous in the formation and progress of the Irish Amelioration Society (a communication on which appears in another column), from which we have before expressed ourselves, as auguring so much benefit to the population and the public; and we trust they will persevere in carrying out this grand feature of employment. Crossing the island from Dublin to the city and bay of Galway, and thus connecting the Shannon at Athlone, with the eastern and western shores, this line alone would be of vast importance, while a complete system of railways would be the salvation of Ireland. Unlike the system of setting men to labour on unproductive works, merely to keep them to some employment, to prevent their filling the union poor-houses; the establishment of railways—while the labourer upon them would be fully remunerated during their construction—opens up a field of constant employment in their future working—a fountain of certain remunerative return for the capital invested — and a rapid means of transit throughout the island, which would vivify her commerce, re-animate her now despounding tradesmen and agriculturists, and sow the seeds of future prosperity, happiness, and content. Money, however, must be had before this desirable undertaking can be commenced; and in the present depressed state of the share market, we fear it would be hopeless to offer the shares to the public at the present moment. It was suggested at the meeting that, if properly applied to, Government could not object to advance 500,000*l.*; and we should imagine, when its employment would certainly be productive of such vast benefits, and when, by the issue of debentures for the purpose, on security of the works, the current income of the Treasury need not be interfered with, that not only would they "not object," but that they would hail the opportunity of thus assisting to advance the best interests of Ireland. Give the people employment, in forming these iron links, which shall unite all parts of the kingdom, for rapid transit of commercial, manufacturing, and agricultural produce, and we shall hear no more of disaffection, or deliberate assassination—her population settling down into habits of contented and productive industry, as employment was provided for them.

It has often been our province, as journalists, more particularly as regards the metalliferous produce of the earth, to record reports of valuable deposits of the precious metals, or other important mineral discoveries, which, in the majority of cases, turn out either to be rumour only, or at least partial indications, productive of no good results. The past few weeks have, however, been pregnant with important information of the discovery of immense deposits of gold in California—reports which we at first received with much caution and incredulity, but which, from the confirmations continually since received, through the American press, we feel bound to place some reliance on. It would thus appear that, after centuries of vain research, the true *El Dorado* has been hit upon by accident, in Upper California. Along the banks, to a great extent, and in the bed of the Sacremento River, vast deposits of gold-dust exist in the sand at the surface, which requires only washing to obtain the auriferous products. The town of San Francisco, situated near the river, is nearly tenantless, having poured forth the greater portion of its inhabitants in prosecution of that most attractive of all undertakings—the gathering of gold. The quicksilver mines, too, but lately discovered, and which were producing so prolifically under the most rude methods of reduction, are all but deserted; the workmen, yielding to the common impulse, have left their legitimate occupation in the hope of obtaining a good share of the more precious substance strewed so profusely by the bountifully overflowing hand of Nature along the sides, and throughout the current of this interesting and as yet unexplored river.

This is, at all events, the substance of repeated notices from the districts; and although, with regret we say it, many similar statements in the American journals are totally unworthy of the least credulity, and which publications have become a bye-word for ridiculous and far-fetched tales, we cannot but believe that there must be some grounds at least for these repetitions of the notice of a discovery in which the nations of Europe, and, indeed, the world, are interested. While we wait its more unquestionable confirmation, we cannot but reflect on the immense importance and advantage to the people of the United States which this discovery in a newly-acquired territory, whether acquired by fortune, force, or fraud, secures to them. This source of wealth cannot be left to the mercenary grasp of individuals; the gold-producing lands must be secured and worked by the Government—and thus we see them, after a short, but brilliant career, appropriate to themselves both territory and wealth, far beyond what was foreshadowed, or foreseen, by the most prescient or sanguine of their pilgrim forefathers. As Englishmen, however, and as leaves in common with them of the great Saxon genealogical tree, whose branches are now flourishing throughout every clime, we cannot but congratulate them on so magnificient a discovery, trusting that we may not have to deplore the consequences of this addition to their elements of power; and that instead of rendering their friendships less stedfast, and their State policy more warlike, we may see them devoting their success to the amelioration of society, the abolition of slavery, the advancement of science and the arts, and the cultivation of peace and commerce with all the nations of the globe. Should the Sacramento River and its banks yield but half the golden harvest the information hitherto received justifies us in believing it will yield, it will, in a great measure, modify our national commerce, and render America a serious rival to Russia in the supply of gold to European nations—the greater portions of which at the present period, and for a considerable time past, being brought from the wilds of Siberia.

In another column will be found some further information, and an interesting report, of the discovery of a gold deposit in our own territory, the Quebec district of Canada; and which—with less flaming accounts—has something more of steady promise, because of much less pretensions than the Californian information.

We find that our recent remarks on the North British Australasian Company have had some effect on the proprietary. We are determined, however, not to allow the matter to rest, until we rouse the shareholders to a sense of their position, and to a conviction that it is necessary to make an exertion to place their affairs on a more satisfactory footing. We have received a copy of the Deed of Copartnery, and also a letter on the subject, by an intelligent shareholder, lately published in Aberdeen. We have not space to give these at length in our columns at present; but shall content ourselves, in the meantime, with noticing the more important points, making use of the statements in the documents alluded to. We may observe, that the writer of the letter is a resident in that county; and he mentions, at the commencement, that he has taken a considerable interest in, and devoted some time and trouble to, the affairs of the concern; and it may, therefore, be believed that he can throw some light on its position. But, in 1844, he was also a member of a committee of inquiry, who entered into an examination of all the documents, which induces us to attach additional importance to his observations. He is convinced that, as a company, they possess the means of complete success; but that matters have been, and continue to be, most shamefully mismanaged.

On perusing all the facts of the case, we most fully agree with him. The first clause in the deed is, "The proper object and business of the company shall be the acquisition of land, either by purchase or otherwise, and of other property, real and personal, for resale, agricultural, or grazing operations, or such other use and purpose as may, from time to time, be deemed most beneficial for the interest of the company; and, also, the granting of loans, or advances, on the mortgage of real property on the deposit of title deeds, &c., &c., together with such agency, exchange, and commission transactions, as may appear to be safe and profitable, drawing the rents, interests, dividends, and profits arising thereon, and dividing the same amongst the partners."

Now, we are of opinion that, on the discovery of the copper ores, the mining operations should have been carried on as a separate undertaking, managed by a distinct and qualified committee—the original concern being, from time to time, credited with the profits and advantages arising from this source; but this is not the only, nor the greatest, violation of all the principles which should have guided those who were trustees for other people's property. By the second clause in the deed, the capital is fixed at 50,000*l.*, with power to increase it, "*by the creation and addition of new stock*;" then it is specially provided, "but declaring always, as it is hereby expressly provided and declared, *that no money shall be borrowed* by this company; *nor shall any investment, or engagement, be made, or entered into, beyond their own paid-up and proper tangible capital and means at the time.*" Now, the capital stock of the company was, at first, certainly limited, as here directed, to 50,000*l.*, and it was all remitted to the colony during the first 12 months, with the exception of 3290*l.*, which appears to have remained in the hands of the cashiers at home.

On the 31st of July, 1841, the first annual general meeting of the shareholders was held, at which the directors, in their report, informed the partners that the business of the company consisted of three general branches:—1st, loans and discounts; 2d, grazing and agricultural operations; and 3d, purchases of land and shares of joint-stock companies for re-sale—which business was all in accordance with the provisions of the contract. Although the undertaking was established in Aberdeen only in 1839, yet the profits were represented at this meeting to be already very large, and the directors recommended that a dividend, for the year ending 31st of December, 1840, should be paid, at the rate of 12 per cent., leaving a considerable sum to be carried to the credit of a reserved fund. They also recommended that 50,000 new shares be given off, in terms of the contract, at a premium of 6*s.* per share. All these recommendations were sanctioned at a subsequent meeting, and carried into effect. The first and the last dividend which the unfortunate shareholders have got, through the most culpable mismanagement. It is admitted by the directors, that the *first* balance-sheet, received from the manager (Mr. Beattie, afterwards dismissed), to 31st December, 1840, and laid before the first annual general meeting of the company, on 31st July, 1841, exhibited investments in the colony to an amount of 28,000*l.* *beyond* the amount of the capital stock of the company, in direct violation of the second clause of the deed, quoted above. This fact was not noticed in the report by the directors to the partners, nor did the directors, so far as known, complain to the manager of his having made investments to so large an amount beyond the paid-up capital, notwithstanding the provisions of the second clause of the contract. Under the circumstances, it is acknowledged that the directors had it not in their power to correct this mismanagement, but they certainly might, and ought, to have pointed it out to the partners, and also to have rebuked the manager; they did neither the one nor the other, but approved highly of his conduct, and led the general meeting to join in this approval. This is one of the first reasons why we consider the present direction have entirely forfeited the confidence of their constituents. The directors, in their report (embodying the manager's fifth and sixth reports to them) on the business of the company, for the year ending 31st December, 1841, as read at the second annual general meeting, of September 6th, 1842, informed the shareholders that the manager had been perplexed, and his efforts retarded, by the state of the financial and commercial affairs of the colony, which, from October, 1841, had become deranged and depressed, and that the profits on the business were much less than those of the previous year. In the face of this, the directors had the imprudence to conclude their report in these terms—"The manager continues invariably to state that he can employ additional capital beneficially. The present, however, does not seem to be a favourable time for increasing the capital of the company, by giving off new stock [the only way in which it could legally be done.—Ed.]—but as it appears that obligations had been entered into *in anticipation of an increase of capital*, and these have from time to time to be renewed at heavy colonial interest, the directors are of opinion that, *in order to clear of these obligations*, and with a view to save the difference between colonial interest and the rate payable in this country, additional funds should be raised and remitted to the manager. The directors have, therefore, resolved to apply to the shareholders for *authority to raise a sum* not exceeding 20,000*l.*, upon such terms as the same can be obtained at for the above purpose; and they now request the authority of the shareholders to that effect. Should the shareholders acquiesce in the opinion expressed upon this subject, and grant authority accordingly, the directors would recommend that the advance shall be reckoned of a temporary and not of a permanent nature; and, therefore, that the manager shall be instructed to realise, as soon as he can do so with prudence and safety, such of the investments as he shall deem it most expedient to part with, and remit the proceeds to the cashiers, to be applied in liquidating the advance which may now be made."

The true cause, we believe, for borrowing the 20,000*l.* arose from the difficulties in which the manager, supported by the directors, had placed himself, by making investments to a much greater amount than the capital of the company; and had the directors stated this to the partners, they would, probably, have refused to raise money at home by loan, and so far the partners were induced to act under a misapprehension of their true position. But we positively deny, that by the 2d clause of the contract, the shareholders had legally the *power* to give any such authority as is here asked of them, and of this the directors themselves must have been quite aware. As we have already stated, that clause provides, "that no money shall be borrowed by this company." The directors have lately again set at nought the provisions of the deed in this respect, by raising a loan of 17,000*l.* However, we shall stop here for the present, reserving the further details in our possession for another and an early opportunity. We have much more to say, particularly with regard to the mining operations, but we cannot conclude this article, without making a suggestion to the proprietors in general.

We address the Scotch as well as the English shareholders—indeed, the former are by far the more numerous, and must have an equal desire to see matters set right. We have evidently no object to serve, but to expose abuses where they exist, and to aid those whom we believe to be wronged. This, we consider, to be one of our greatest public duties, and we shall do everything in our power to fulfil it; we, therefore, recommend that some of the principal shareholders, in or near Aberdeen should immediately call a meeting, for the purpose of considering and adopting a plan to insure the election of an entirely new board of directors at the next annual meeting—that a requisition, by means of a short advertisement in some of the London papers, be made to the English partners for their co-operation, and that every exertion should be made to obtain votes and proxies to support such men as are willing and qualified to act as directors. It would also be advisable that an English gentleman should be elected as a corresponding secretary, or agent, through whom those interested in this country might obtain every information that is afforded to those in the north; and in turn, that he should be capable of giving the directors intelligence and advice concerning any point affecting the company's commercial, agricultural, or mining operations.

By the sixth clause of the deed, the managing committee hold office only by the year; and, by the seventh clause, "In the choice of a committee of management, and all other matters submitted to the consideration of the shareholders, the partners present at any meeting shall have right to vote, according to the number of their shares—each share being entitled to one vote;" "and, in the election of members of committee, partners may vote by *proxy*, either general or special, addressed to a shareholder—the mode of election being for the partner voting, whether for himself or as a proxy for another, to hand in a signed list of the names of those for whom he votes to the president of the meeting, who shall, with the assistance of the agents, examine the lists and declare the election."

Improvements in Manufacturing Salt.—A patent has been granted to Mr. G. Ellins, of Droitwich, Worcestershire, for improvements in apparatus for manufacturing salt; first, in the application of a current or currents of heated air to act beneath the bottom of the pans, to communicate additional heat to the hot brine therein, such currents being forced by a blowing apparatus to pass in small streams through heated iron pipes. To other portions of the bottoms of the pans steam is applied, and the steam and air are afterwards passed into flues of an ordinary drying stove for drying salt. Secondly, in the construction of a series of rakers, for raking the salt from the bottoms of the salt pans, and accumulating the salt upon a moveable table, where the brine will drain from it, and afterwards, by a movement of the table, the salt can be transferred either into a storehouse, or a carriage, or other conveyance. Thirdly, or new apparatus for manufacturing salt; consisting of moulds or frames for receiving salt, which is to be dried in squares, and the means of filling the salt into the moulds, and also peculiar means for removing the moulds out of the pans, and afterwards transferring the squares of salt into the usual drying stove. And, fourthly, for improvements in regulating the quantities of fuel supplied for heating the salt pans, so as to keep up a regular temperature, and avoid waste of fuel. The raking apparatus above mentioned, consists of rakers moved backwards and forwards in the pans by means of ropes, winding on and off a drum, placed on a shaft on each side of the pan, regulated by an endless strap from one to the other. One of these shafts receives motion from some prime mover, through a mitre wheel, alternately secured by a sliding clutch, thereby continually reversing the motion.

Original Correspondence.

BLACK-BAND AND HOT-BLAST.

Sir,—The bursting of the water-pipes in Liverpool, mentioned in your last week's Number, furnishes an excellent commentary upon the quality of Scotch iron, and upon the transcendent abilities of the manufacturers.

Black-band, as taken from the mine, contains, in alloy with its carbon, the following metalloids or earthy matters:—Lime, sand, clay, and magnesia *always*; baryta sometimes; and occasionally strontia. These oxidised bases, when revived and alloyed with the iron of the black-band, all tend to deteriorate the quality of the iron in one way or other. Thus, magnesium confers brittleness—in fact, the *brown paper* characteristic, noticed in *Gore's Advertiser*. Calcium induces inveterate red shortness, and silicon cold and red shortness; whilst a happy admixture of these alloys produces an iron which is both red-short and cold-short. All these oxidised bases are mingled with the carbon of the black-band, so that, in fact, each oxidised base is in contact, atom for atom, with the carbon requisite to deoxidate it. This deoxidation is partially effected during the calcination of the black-band, often performed at an elevated temperature. The masses of calcined ore are now transferred to the blast-furnace, where, lest a sufficient temperature should not be attained to metallise completely the partially deoxidised earth shut up in the calcined band, the intense heat generated by a powerful hot-blast is applied, and the result is just what we might expect—viz.: an alloy of supercarbonised iron, with four, or five, or even six other metals, each metal debasing the nature of the iron in one or more points of quality, and the number of the alloyed metals diminishing the infusibility of the alloy, in proportion to the relative qualities of each which are present. Thus the Scotch pig-iron is a fusible alloy of iron and other metals, which is found to fill readily and accurately any sand pattern, or mould, prepared for the purpose of casting; and, except this one good quality, it possesses not one other characteristic of good cast-iron; and even this quality may be conferred upon any kind of pig-iron, by simply adding magnesia in small quantities to the mine burden of any given blast-furnace.

Had the Scotch ironmasters possessed even the slightest knowledge of the properties and value of the blackband ironstone, which my father presented to them in the year 1801, Scotland would now have been as preeminent for the excellency of its bar-iron, prepared from blackband, as it is notorious for the production of vast quantities of pig-iron, which sells usually at 40s. per ton less than the common make of England and Wales. Calcined blackband yields from 60 to 80 per cent. of iron; yet no other use has hitherto been found for this magnificent mineral than the manufacture from it of an exceedingly inferior species of cast-iron. What would be the worth to the Scotch ironmakers of a decarbonising process, which would, at an expense of 4s. 6d. per ton, convert their pig-iron into masses of tough malleable iron, fit for rolling out into finished bars, requiring neither cutting, piling, nor re-heating? Robert Mushet.

Coleford, Oct. 17.

IRON, AND ITS VARIOUS CONDITIONS.

Sir,—I did not consider myself sufficiently learned to enter into a controversy with Mr. Radley, but a rational matter-of-fact letter from Mr. R. Mushet appears in the *Mining Journal* of the 14th inst., to which I take the liberty of sending a brief reply, conveying my opinions on the properties and the manufacture of iron; at the same time I must state, that these conclusions have not been drawn from actual experiment, but from close observation of the processes, and reflection upon them. I agree fully with Mr. Mushet in his remarks generally, but I beg leave to state, that iron prepared as he proposes—that is, brought nearly to the state of the pure metal—would be universally condemned by all blacksmiths. The iron they require for all ordinary purposes, agricultural and domestic, for small jobs about manufactories, mines, and collieries, is just such as is now produced under the denomination of merchant bar-iron—a mixture of fine fibres of pure metallic iron and cinder. Pure iron alone would be extremely difficult to work in a smith's fire, and to be turned and twisted into all the various forms required for the purposes just referred to.

The fact is, that malleable iron should, in my opinion, be formed in two distinct and separate states; one as the pure metal, for railway bars, boiler-plates, sheets, nail-rods, hoops, chain, and wire; the other as merchant bar-iron, for the use of blacksmiths. I agree with Mr. Mushet, that the period is not far distant when pig-iron will, by some cheap and easy method, be made ready for drawing through rolls, and produced at once in the various forms I have enumerated, without refining and puddling; but I conceive that these two operations, or something similar to them, are necessary for producing the sort of iron required for smiths, as merchant bar-iron. It is by refining and puddling that a portion of iron is converted into cinder; the metallic portion is, by its presence, divided, and these operations, in conjunction with squeezing and drawing out through rolls, cutting up, piling, and re-heating, altogether complete that intimate mixture of fibres of pure metallic iron and cinder, which constitutes the excellence of merchant bar-iron. I must beg it to be understood, that I advance these opinions with diffidence, not in any dogmatic spirit; my desire is, to have them refuted, or established.—T. H. Leighton. *Cwmammon, Oct.* 17.

COPPER SHEATHING.—No. VII.

Sir,—I am glad to resume the correspondence with "A Roaster Man.' An *acid* assay, by precipitation with iron, of 96 per cent., as quoted by "A Smelter and Refiner," would allow a sufficient quantity of *alloy* to render the quality of the metal dependent on its nature. If the alloy be congenial, the copper might be workable and durable; if uncongenial, unsatisfactory in both respects. I have not found so much alloy in the worst sheathing that has passed under my analyses.

On the propriety of roasting up to "blister pitch," I have no present reason for differing from "A Roaster Man;" nor do I remember to have differed from any of his opinions. It would, indeed, be with diffidence that I should do so; for, while fully appreciating the blow-pipe as a guide to the crucible, and the crucible to the furnace, I am not unaware that time, bulk, and motion, have their influence on chemical reaction, and in few cases more likely than between scorified oxide of copper and regulised sulphuret of iron. Therefore it is that I am so desirous to know what is, or may be, understood of the successive steps of the process on which must be founded our reasoning and suggestions for improvement, as stated in my last. He says, for example, that "if the granulated ore metal be well calcined, the next melting will take away most of the iron." Let me, then, ask him, what other alloys he considers it will leave in the second regule, or "fine metal?" and how many per cent. of fine copper? In short, will he answer the questions in my last in as much detail as he may be able and at liberty to do, both to elicit the opinions of other smelters, and to give me some substantial ground for writing on—not to occupy your columns, or my own time, in building a house of cards upon crucible experiments, which the first breath of working practice may overturn?

Mr. Mushet's carburet of copper: His case of cementation is convincing, as well as interesting, though I am unwilling to believe that a proportion of carbon, sufficient to cause sensible *increase in weight*, should elude our means of detection. Can he oblige me with a sample of such cemented carburet of copper by post; or, if not, will he give us, through your columns, the *details* of the process by which it was made, and the gain per cent. in carbon? Will it be sufficient to keep slips of sheet copper a day red hot, buried in charcoal, and to raise the heat to fusion at night?—J. Prideaux: *Plymouth, October* 17.

SMELTING AND REFINING COPPER.

Sir,—I observe in a former number of your Journal a communication from "A Roaster Man," in which he states that the refinery furnace is made for a specific purpose, and was not intended to receive any other metal than blistered copper, and that a difficulty occurs in making tough copper, from the metal being over-polled; from which observation it does appear to me that he is not well practised in the business. I can inform him, that the best copper sent out from the neighbourhood of Swansea is produced by putting the metal into the refinery in a state called "pimpled copper," and which is refined without any trouble or difficulty whatever. Among the remarks made by your correspondents on the mode of smelting and purity of metal, from the continent of Europe, I have not seen anything relative to the old establishment carried on by the Marquis De Remisa, and a company. These celebrated mines for ages, even as far back as the period of the occupation of Spain by the Moors, have produced rich ores to a vast amount; the veins are in claylate, and are from 35 to 95 yards in width, running in a north-easterly and south-westerly direction, with a southern underlie; they are worked from 900 to 1100 yards in length, and there is an adit 55 fms. deep, which unwaters the entire workings, as no excavations are carried on below. Large excavations are made longitudinally and transversely at different levels through the body of the vein, leaving pillars to support the roof, similar to colliery work. The ore is copper pyrites, giving about 7 per cent. of copper, and containing as much as 50 per cent. of sulphur. It is calcined in the open air and smelted in blast furnaces, undergoing three operations, and is refined free from sulphur. Wood only is used in smelting; the company continue planting every year, to compensate for the consumption. Stalactites of carbonate of copper are constantly forming on the roof and sides of the old workings. The water from the adit contains copper in solution, which is made to pass through wooden tanks, and precipitated in the usual mode by bars of iron. Smelter and Refiner.

Swansea, Oct. 18.

COPPER SHEATHING.

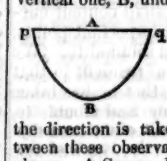
Sir,—In your Journal of the 7th instant, I observe a remark, by "A Roaster Man," of the following purport:—"The intermittent calcinations practised in Germany have nothing to do with our's—their ores are poor, and will bear such processes; our's is a rich ore, averaging 20 per cent. of copper," &c. In reply, I beg to state, that the ores in Germany are some as rich, and, in general, average more than the Cornish. Perhaps, the "Roaster Man" means, that the pile prepared for smelting, when the rich foreign ores are mixed with it, average 20 per cent.; this, however, I much doubt. He decidedly has never seen, or, if he has, he has not sufficiently observed, the processes carried on in Germany; the ore is not subjected to more than one calcination. The regulus which comes from the blast, averaging 25 to 30 per cent. of copper, undergoes several calcinations, and is then taken to a furnace, where, without any other smelting, it is converted into blister copper. I shall make no further comments on this subject; nor should I have again obtruded myself, did I not think it was my duty to set those right who might otherwise be misled by your practical correspondent—the "Roaster Man."—Germanicus: *Oct.* 14.

SMELTING IN SPAIN.

Sir,—The mining company, "La Esperanza," established in St. Sebastian, proprietors of the mines of grey and green copper ore, named St. Anna, in the district of Orbaiceta, have commenced the construction of a smelting establishment for the reduction of their minerals. Lead and copper ores are very abundant in the province of Navarre; the lead is generally discovered in irregular deposits, beneath which are discovered regular veins, intermixed with rich squats and bunches of ore; the copper is, likewise, found in the same manner under veins of hepatic iron pyrites, and, in some cases, in such large quantities as to give a large profit, when solely worked for its own value, without any regard to the iron found with it. The grey copper is found in irregular veins in a silicious matrix. These mines have been worked from three to four years; and large quantities of stuff are lying at the mouths of the mines, in consequence of there having been no establishment to reduce the ores. It is believed that the erection of these works will give a considerable impulse to the exploration and working of the many mineral deposits which the province is known to contain, and that others will be subsequently established at convenient points for the reduction of those ores of lead and copper which have already been discovered and partially worked in other parts of the province.—C.: *Regent's Park, Oct.* 16.

ON DIALLING.

Sir,—It is well known that, in mines containing lodes of magnetic iron pyrites, the dial is not to be depended upon. It is also clear that, as long as the component parts of the lode are not known, or a certain knowledge is attained how the magnetic power is divided, and what changes it undergoes, it is impossible to trust with any security to the guidance of the dial, when a correct and accurate measurement is required. Some years since, when dialling at the silver mines at Kongsberg, I hit upon a plan which I believe will secure diallers from the variation of the compass. The German dialling (*Markscheideri*), which is generally used in our mines, is done with the help of a line and dial, to determine the situation of a given system of points, on which the form and dimensions of a lode or mine can be judged, and subsequently laid on paper. Each point is determined in relation to a foregoing one, the situation of which is already known. These points, from which the measurement is taken, or from whence one or several points are determined, I shall call stations. When the variation is known at all the stations, it is not difficult to find the truth in the appearance of the needle at each of them. All the observations with the dial in one and the same place have the same fault. In what manner the variation at the following station is related to the preceding one can be seen when the line is tightened between the two, first by observing its direction with the first point and, as near as possible, with the next, and comparing these observations with each other. The difference between this, and the difference between the variation of both places, is naturally one and the same. In this manner you can proceed with the measurement, and determine the variation from station to station through the whole mine. If the variation is known in one of the stations, with a proper comparison of the changes that have been observed, it is easy to determine the others. To those who understand the German method of dialling, it will not be necessary to enter into further particulars. I shall merely state how the evil can be modified. You pass from a station, A, to the vertical one, B, underneath; in this case there can be no question of observing the direction of the line which unites them.



Under such circumstances, two points, *p* and *q*, are chosen—so that the tightened line passes by in the neighbourhood of A, and, its direction observed, the line with the dial is allowed to sink to B, and it is then fastened afterwards to *p* and *q*, when an observation of the direction is taken. By this means, it is clear that the difference between these observations is the difference between the variation of both places.—A Sexe: *Kongsberg, Oct.* 5.

THE BLAENAVON IRON COMPANY AND ITS PROSPECTS.

Sir,—Rely upon it, you do "the State some service" by the insertion of letters on this unfortunate concern. Allow me, Sir, a small amount of space for a few observations thereon. It appears that, after four years of unparalleled success in the iron trade, this company, possessed of one of the best mineral properties in the kingdom, is well nigh insolvent. The mineral agent bears down upon the furnace manager; and, if left alone, we should have the "Kilkenny cats" over again. My version of the awful state in which this concern is placed is this—the absurdities of a board of directors. The present manager (Mr. Johnson) is a gentleman who has acquired his knowledge by dear-bought experience; and this, Mr. Editor, is the best sort of experience. He is quick, intelligent, firm with those under him, indefatigable in his daily duties, and never thinks his work too hard, or the day too long. I contend, then, that here is a manager with all the requisites combined. How comes it, then, that no better results are produced? I will tell you. The one-half, or more, of the manager's time is uselessly spent in studying and writing out reports, furnishing accounts, travelling to and fro to Abergavenny to meet "*your directors*;" and, when he has laid out a certain course of action that he feels will be of benefit to the company, he is there thwarted by the *wisdom* of a board of empty-headed rulers. The panacea for all the miseries and wretched state of the concern is coke ovens. A saving will be effected thereby, no doubt; but has it ever entered into the heads of that sapient body—"*your directors*"—that the fall in the prices of iron has been at least *double the amount per ton of the whole cost of coals consumed in the blast-furnaces?*

As to the trio of directors, Messrs. Jones, West, and Wheeley, they are three highly-respectable and honorable gentlemen as any in Wales, and, when this is said of them, no more remains. Three more unfit for the duties could not be selected. The consequence must be, that the manager will be more bothered than ever, and the difficulties of the company will increase. There is the 80,000*l.*, and the snug, hitherto suppressed, 120,000*l.*, necessary to be found before, under any management, the concern can go on. Now, Sir, supposing this difficulty got over, I would suggest that the company should state plainly to Mr. Johnson, that *to him was left the sole conduct of the concern, to do with it as he deemed best.* That he should meet the company half-yearly, with accounts duly audited and his report. If anything is to save the concern, in my opinion, that is the course. But, Sir, capital cannot be found to carry on; therefore all other effort is vain. The shareholders have, doubtless, had to pay for the recent reports on the works, &c. Why are these all-important documents suppressed? The inference is that, if produced, there would be an end to the small hopes remaining of getting the 2*l.* 10*s.* per share paid up. The longer the company go on the deeper in the mire they will get; and the course for prudent men to adopt would be, that of at once winding up the concern, selling the same, and pocket the small amount of receipts therefrom, and have done with it. Joint-stock management in iron works never yet succeeded; and men well-informed on such matters say it never will.—Cymry: *Oct.* 19.

IMPROVEMENTS IN THE GALVANIC BATTERY.

Sir,—We are continually reading in your valuable Journal, and other scientific publications, descriptions of new inventions and pretended improvements, which, on investigation, turn out to be either of no earthly utility, or, if they are useful, in numerous cases do we find that they are mere copies, or modifications, of other people's discoveries, whose scientific credit, as well as interest, are too often thus filched from them. Such are the improvements (?) alluded to by "Steam," of Dudley, in two or three of your past Numbers; and, in your last, there is a notice of the Rev. Dr. Callan, Professor of Natural Philosophy in Maynooth College, having made an important discovery in galvanism—viz.: that common cast-iron is greatly superior as a negative pole even to platina; and that a battery of such material, with the usual positive poles, is much more powerful than Grove's or Wollaston's, and, of course, of any hitherto constructed. Now, Sir, Mr. Davidson, of Aberdeen, long previous to 1842, had employed iron as the negative metal in his batteries, by which he endeavoured to establish electro-magnetism as a motive-power, and in which he so far succeeded as to propel a locomotive, loaded with six tons, at the rate of four miles an hour. In the latter part of that year, Mr. Davidson exhibited a circular model of a railway, with an electro-magnetic locomotive engine, also a turning lathe, a printing-press, and saw-mills, propelled by the same agency. The railway was about 12 ft. in diameter, and the motion was constant, regular, and effective, so far as to prove the practicability of the force employed, could means have been devised to obtain sufficient power by increase in the size and number of the cells of the battery with sufficient economy. It has often surprised me that, since Mr. Davidson's exhibition, we have heard scarcely anything of galvanism as a motive-power, and it would appear as if the scientific world had given up all investigation on the subject. Perhaps, Mr. Editor, these few remarks may elicit something from some of your correspondents on this interesting science. You do not say from what source the so-called discovery of Dr. Callan was obtained; but I trust this contradiction may come to his knowledge, as well as that of the author of the paragraph, as I should imagine the doctor of too independent and liberal a mind to wish the public to believe he claims the credit of a discovery which really belongs to another, and that made years ago. Viator.

Clerkenwell, Oct. 17.

EARTHENWARE PIPING.

Sir,—Might I request you would inform me whether clay pipes have, in any case, been used for the conveyance and distribution of water under pressure; we have proved the pipes to stand a pressure of 400 feet, but the difficulty is in jointing them. In a recent number of the *Mining Journal* I observed a very ingenious mode of jointing clay tubes for protecting the wires of the electric telegraph, and it struck me, that by some similar expedient, the object I have in view might be attained, which would allow clay to be substituted for iron pipes, in the conveyance of fluids, so as not only to lessen the cost, but to employ a material far better suited in many respects for such a purpose. It occurred to me that from the extensive connection of your Journal with scientific engineers, it might be in your power to furnish me with some information on this subject, which I have, therefore, taken the liberty of requesting. P. W. K.

Drummellar, Ayr, N.B., Oct. 16.

[We are not aware of clay, or earthen, pipes being employed for the conveyance of water under pressure, or in any other way than for drainage, nor do we think they would stand sufficient pressure. If pipes can be obtained sufficiently strong, Mr. Whishaw's joint to his multitubular pipes would be the most appropriate. Perhaps some of our correspondents will reply in our next.]

EMPLOYMENT for the LABOURING POPULATION of IRELAND.

Sir,—I have lately remarked with much pleasure two or three notices on the use and advantages of peat and peat charcoal for domestic, metallurgical, and manufacturing purposes, in your valuable columns, and am also happy to observe an advertisement of a new company for the amelioration of the state of the peasantry of Ireland, by employing them in digging and converting the uncultivable bogs of Ireland into a valuable and profitable article of commerce, and reclaiming the land beneath for purposes of agriculture. The condition of Ireland at the present moment is an anomalous one—possessing all the elements of prosperity in a high degree, rich in metallic mineral, with a material for reducing it of a most superior description in inexhaustible profusion; blest with soils capable of producing the various fruits of agriculture in teeming abundance, and with water-power sufficient to set in motion the entire machinery of Europe, we find trade and commerce at a standstill, the peasantry in a state of semi-barbarism and revolt, and the entire community split up into factions, apparently without either of them knowing their precise aim or end. The great and first object to change this unhappy state of things, must be the employment of the labouring population; and to no better, or more immediately profitable, labour can their physical energies be turned than in the preparation of peat, and thus opening out new agricultural districts which have hitherto been barren unpeopled wastes. The value of peat charcoal as a fuel for smelting iron ore, as well as for subsequent working of the metal in the forge, is now well known; its entire freedom from sulphur and other impurities, to which coal and coke are more or less liable, renders the metal produced by it of the very best quality; and to the smelting with peat and wood charcoal must be attributed the superiority of Swedish and Russian iron. It is highly probable, that were peat charcoal once to be manufactured on a large scale, and, consequently, at an economical cost, many iron-works in Ireland would be established, and the vast deposits of iron ore, now lying useless in the earth, be turned to the support and comfort of the peasantry, and a benefit to the public at large. The establishment of this company will, I hope, open a new existence for Ireland—not only from its individual success, of which, if properly carried out, I have no doubt, but from the encouragement and example thus given to others, and the convincing proof afforded to the public, that "Green Erin" has within herself all the elements of agriculture, metallurgy, and commerce; that it but requires their judicious application to convert a starving and a discontented population into one of peace, comfort, and plenty; and that, with the prospect of fair remuneration, sufficient to feed and clothe his family, an Irishman is as willing to labour for his living at home, as he proverbially is in other countries, to which poverty or chance has driven him. That this company may prove the harbinger of more prosperous times for unhappy Ireland, is the sincere wish of—An Englishman: *Falmouth, Oct.* 16.

THE COPPER COINAGE.

Sir,—Some time since, a correspondent in the *Mining Journal* suggested that the Government should immediately proceed to the issue of a new copper coinage, to the amount of 1,000,000*l.* sterling, for the purpose of giving an impetus to the copper trade, and, consequently, benefitting the mining interest of Cornwall. I would recommend it also on such grounds, but there are other considerations which would render such measure desirable. There are at present in circulation large numbers of half-worn, battered, defaced, and spurious copper coins; and it has long been considered a desideratum to decimalise our coinage, and thus render much greater facilities in calculations and in trade than exists in its present irregular and unsatisfactory proportions. This might be most easily effected by degrees, without putting the Government to any particular inconvenience, or requiring more than the usual exertion by the officials at the Mint. By the last current coinage, 1846, 1 lb. of copper, which cost in the market under 9d. per lb., is coined into about 24 pence—a pretty decent tax on the community, to cover the expense of coinage. Let the whole of the copper coin in circulation be called in, and exchanged for a new issue, as, I believe, the first step to a decimalised coinage is being taken, and that an issue of 2s. pieces will soon take place. To follow up this measure, let a copper coinage be struck, still called pence, halfpence, and farthings, but of a weight in such proportion to the market price of copper (less expense of coinage) as would make 10 pence equal to 1s., 20 pence to a 2s. piece, and 10 of such 2s. pieces being equal to one sovereign; the latter would then represent the value of 200 copper pence. This would be a most easy step towards this much-to-be-desired end; sixpences and half-crowns might pass as usual, as they would still represent their respective worths; our copper circulation would be creditable to us as a nation, and any improvements might be followed out at leisure.

While on this subject, allow me to introduce a plan suggested by a gentleman connected with the assay and smelting of metals, which, although certainly more perfect than the above, would require so sudden a change

in the whole arrangements at the Mint, and a system so difficult for the population at once to adopt, that I think it would not be so desirable as mine. He proposes that the gold sovereign, or pound, be the standard coin—that a coin, of an alloy of gold and silver, be issued, called a *deca*, value $\frac{1}{10}$th of a pound—that a coin, of an alloy of gold, silver, and copper, be issued, called a *centa*, value $\frac{1}{100}$th of a pound—and that a coin of copper be issued, called a *milla*, value $\frac{1}{1000}$th part of a pound. By this system, we should have—10 millas = 1 centa; 10 centas (100 millas) = 1 deca; 10 decas (1000 millas) = 1*l*. The milla would thus be of the value of rather less than ¼d., the centa about 2½d., and the deca 2s.

Cheapside, Oct. 11. ——— TRADER.

THE COPPER AND SMELTING TRADES.

SIR,—From the numerous remarks which have been made in your Journal of late, it is evident that the subject of the copper trade is attracting considerable attention; and, therefore, a few details of its history may not be uninteresting to your readers. In the course of the observations which I wish to make, I shall have occasion to refer also to the relative richness of the mineral districts of England and Ireland, and, perhaps, also of Australasia, from whence the copper ore is principally obtained, without forgetting the productiveness of the mines of Cuba and Chili.

I have no doubt your readers are aware that it was the mineral riches of the south-west coast of Britain which first induced foreigners to trade with us. But, at that time, tin appears to have been the principal, or the only, metal which was known to exist in this country. Indeed, authorities agree in stating that the English copper mines were scarcely worked prior to the last century.

The following table shows the quantity of copper ores sold in Cornwall, the produce, standard, and the amount realised in each year, from 1729 to the 30th June, 1848, inclusive. The principal portion of this interesting statement has been kindly furnished me by a friend, in whose ability and correctness I place full reliance. Neither the copper nor produce of the first five years is to be obtained, and not having the *amount* of money for the first 15 years, the *standards* cannot be ascertained. Up to the year 1832, inclusive, the return is made up to the 31st of Dec. in each year; and, after that date, I am indebted for my facts to "Gryll's Annual Mining Sheet," which are made up to the 30th of June in each year:—

Particulars of Copper Ores Sold in Cornwall, between the years 1729 *and* 1848.

Years.	Copper Ore. Tons.	Copper. Tons cwt. qr. lbs.	Amount. £ s. d.	Produce.	Standard. £ s. d.
1729	2,216	—	—	—	—
1730	2,832	—	—	—	—
1731	2,555	—	—	—	—
1732	1,714	—	—	—	—
1733	3,113	—	—	—	—
1764	16,437	1,869 4 3 15	—	11¼	—
1765	18,425	2,089 6 3 14	—	11¼	—
1766	21,776	2,520 13 2 27	—	11¼	—
1767	19,636	2,016 3 0 22	—	10½	—
1768	23,684	2,555 17 1 6	—	10¾	—
1769	26,353	2,706 15 3 0	—	10½	—
1770	31,758	3,267 9 2 13	—	10½	—
1771	28,091	3,073 7 1 25	—	20¼	—
1772	27,045	3,060 18 2 25	—	11¼	—
1773	27,654	3,152 1 0 24	—	11	—
[The intervals from 1733 to 1764, and from 1773 to 1800, cannot be obtained.]					
1800	55,981	5,187 0 3 7	550,925 1 0	9¼	133 3 0
1801	56,611	6,267 18 3 10	476,313 1 0	9¼	117 5 0
1802	53,937	5,228 15 3 5	445,694 4 0	9¼	110 18 0
1803	60,566	5,615 16 0 21	533,910 16 0	9½	122 0 0
1804	64,637	5,374 18 1 20	570,840 11 0	8¾	136 5 0
1805	78,452	6,234 5 0 6	862,410 16 0	7¾	169 16 0
1806	79,269	6,863 10 2 13	730,845 6 6	8¾	138 5 0
1807	71,694	6,716 12 1 26	609,902 13 0	9¾	120 0 0
1808	67,867	6,795 13 2 25	495,303 1 6	10	100 7 0
1809	76,245	6,821 13 1 19	770,028 15 6	8¾	143 12 0
1810	66,048	5,682 19 1 27	570,035 8 0	8¾	132 5 0
1811	66,786	6,141 13 3 7	556,723 19 0	9¾	120 12 0
1812	71,547	6,720 7 2 4	549,665 6 6	9¾	111 1 0
1813	74,047	6,918 3 0 6	594,345 10 0	9¾	115 7 0
1814	74,322	6,369 13 3 7	627,501 10 0	8¾	130 12 0
1815	78,483	6,525 6 3 25	552,813 8 6	8¾	117 16 0
1816	77,334	6,697 4 0 17	447,959 17 0	8¾	98 13 0
1817	76,701	6,498 2 0 16	494,010 12 6	8¾	108 10 0
1818	86,174	6,849 7 1 1	686,005 4 8	7¾	134 15 0
1819	88,786	6,804 2 3 7	623,595 4 6	7¾	127 10 0
1820	91,473	7,508 0 3 26	602,441 12 0	8¾	113 15 0
1821	98,426	8,514 19 2 12	605,968 19 8	8¾	103 0 0
1822	100,364	8,569 18 3 10	636,715 9 6	8¾	106 14 0
1823	97,017	7,730 2 1 7	606,083 1 8	8	112 16 0
1824	103,710	8,004 9 2 19	636,741 2 11	7¾	115 13 0
1825	110,264	8,468 6 1 20	820,215 13 11	7¾	132 17 0
1826	122,846	9,767 17 2 5	708,268 11 7	8	107 0 0
1827	131,876	10,440 2 0 7	783,818 16 6	7¾	109 16 0
1828	134,272	9,447 8 0 8	714,992 10 6	7¾	112 0 0
1829	130,449	10,292 13 2 18	754,904 0 0	7¾	108 10 0
1830	141,263	11,554 18 0 5	802,979 9 0	8¼	103 2 0
1831	137,893	11,836 9 0 7	798,308 5 6	8¼	99 9 0
1832	136,719	11,491 13 3 12	833,131 17 0	8¾	105 4 0
[From this period the returns are compiled from "Gryll's Annual Mining Sheet," and are made up to the 30th of June in each year.					
1833	138,300	11,185 7 0 0	858,708 10 0	8	110 10 0
1834	143,296	11,224 19 3 27	887,902 9 0	7¾	114 4 0
1835	150,617	12,271 14 1 1	893,402 15 0	8¼	106 11 0
1836	140,981	11,639 11 0 0	957,752 8 6	8¼	115 12 0
1837	140,753	10,823 5 1 26	908,613 15 0	7¾	119 5 0
1838	145,688	11,527 4 1 17	857,779 11 0	7¾	109 3 0
1839	169,551	12,450 18 1 24	932,297 12 6	7¾	110 2 0
1840	147,266	11,037 16 3 1	792,758 3 6	7¾	108 10 0
1841	135,090	9,987 2 1 23	819,949 2 0	7¾	119 6 0
1842	154,180	9,896 3 0 15	822,870 12 0	7¾	120 16 0
1843	153,668	10,926 1 0 6	804,445 19 0	7¾	110 1 0
1844	152,667	11,246 14 1 20	815,246 9 6	7¾	109 17 0
1845	157,000	12,239 2 3 11	835,350 19 6	7¾	103 10 9
1846	158,913	12,447 16 1 16	886,785 1 6	7¾	106 8 0
1847	148,674	11,966 8 0 18	830,739 9 0	8¼	103 12 0
1848	155,616	12,869 19 1 16	825,080 2 6	8¼	97 7 0

From this it will be observed that, within the past half century, the yield has increased nearly 200 per cent.

Besides the produce of British mines, considerable quantities come from Cuba, Chili, and Australia. Copper mines exist in Germany, Sweden, and Siberia, and, to some extent, also in France, Spain, Hungary, and Norway. The principal English mines are in Cornwall and Devon, but veins are also worked in the counties of Anglesea, Stafford, &c. "The copper ores most usually found, and which alone become practically of importance," says Kane, in his *Industrial Resources of Ireland*, "are three in number:—

"1. THE CARBONATE OF COPPER (of which there are two kinds, green and blue).—The green, or malachite, is not unusual in mines, but occurs only in small quantities. It is very rich in metal, and very easily worked; it consists of carbonic acid, water, and oxide of copper, in the following proportions:—

Oxide of copper	72·07
Carbonic acid	19·82
Water	8·11=100

It hence yields 57·7 per cent. of copper. The blue carbonate is still rarer than the green—it is termed "azurite." Its composition is—

Carbonic acid	25·43
Oxide of copper	69·36
Water	5·21=100

And it yields 55·5 per cent of copper.

"2. THE SUBSULPHURET OF COPPER (GREY COPPER ORE).—This ore is sometimes found very abundantly, and is the most valuable of all the ores of copper. More commonly, however, it is only found in small pieces, mixed with the ordinary ore. It consists of—

Sulphur	20
Copper	80=100

"3. THE ORDINARY, OR YELLOW, COPPER ORE (COPPER PYRITES).—This mineral, known by its brilliant golden yellow colour, is a double sulphuret of iron and copper, and contains, when pure—

Sulphur	34·78
Copper	34·78
Iron	30·44=100."

I have thought it right, Mr. Editor, to give you this extract from a work of such acknowledged ability, and which has deservedly acquired a great reputation. In the English mines it is the copper pyrites which form the material produce; and the average produce of the copper mines of Cornwall is about 8 per cent. You will observe, that it contains a great quantity of sulphur and iron; but I shall have to draw your attention to this at another stage of my communication.

Copper is extensively used for many highly important purposes: it ranks next to iron in real commercial value. Its principal uses are for sheathing the bottoms of vessels, for boilers, and a great variety of implements and utensils. Alloyed with zinc, it forms brass and pinchbeck; with tin, bell-metal, and bronze; with tin and silver, speculum metal; and with tin and nickel, the now common compound argentine, or German silver.—"All these alloys (adds an able writer) are of infinite use, entering into the fabrication of almost every species of machinery, implement, utensil, and ornament."

The principal copper mines of Ireland, according to Kane, are those in the Wicklow, Waterford, South-Western, and Tipperary districts; and also those in the clay-slate, north of Dublin. He says—"The line of the excavations of the works in Connorree and Tigrony (in the Wicklow district) extended, in 1819, upwards of 1000 fathoms. At various depths in the mass of the clay-slate occur beds of, what is technically termed, "soft ground," which consists of decomposed slate, of various tints, abounding in particles of pyrites of iron, and sometimes copper and arsenic, and usually accompanied by a considerable body of greyish or yellowish-white clay. When brought to the surface, and exposed to the action of the air, these bodies rapidly decompose, and absorbing oxygen, form alum, sulphate of iron, and sulphate of copper. A similar decomposition takes place under ground, and hence the drainage water of the district contains a very sensible quantity of copper, which has been, and indeed is, economised by conveying the water, as well from the lower as from the upper mines, into tanks, where the muddy particles are allowed to subside. The clean water is then run into pits, containing scrap iron, which causes the precipitation of the copper, and dissolves in its place. An idea of the quantity of copper thus saved from waste may be formed from the fact, that, during Mr. Weaver's management, there were 442½ tons of impure precipitated copper sold—the value of which was 12*l*. 12s. per ton. The quantity of iron consumed was 429 tons 14 cwts."

This shows what economy will do, and is an example to those engaged in mining in other districts—particularly at present, when so much is said of the injurious effects of the reduction of the duty on copper ore, it behoves all mining adventurers to turn their attention to any improvement in their workings. In the 12 years ending 1799, it appears that the mines of Cronebane, in the same district, yielded 7533 tons of ore, containing 9 per cent of copper; and in the 12 years ending 1811, the produce fell to 1934⅜ tons, containing only 5½ per cent. of copper. In 1836, the total quantity of ore returned from the mines, in the Wicklow district, according to the Swansea sales, and the notices published in the *Mining Journal*, was 11,813 tons; in 1840 it was 6647 tons; and in 1843 it was 3227 tons. In 1836 the average price per ton was 4*l*. 14s. 6d.; in 1840 it was 3*l*. 4s. 6d.; and in 1843 it was 4*l*.

From this it would appear that the produce of the mines had fallen off considerably, but such is really not the case. The returns above stated are the sales at Swansea—"But," says Mr. Kane, to whose excellent work I am indebted for most of these facts, "such is not actually the case; on the contrary, the activity of industry in those mines, as well as the profits to their undertakers, is, as I understand, steadily on the increase." The fact is "owing to the copper being now extensively smelted in the neighbourhood of Liverpool, and also to the poorer ores of the Wicklow district being extensively exported to various localities of chemical manufacture, where the sulphur, as well as the copper which they contain, is economised." He proves this by giving a table, showing the ores raised and sold from the Ballymurtagh Mine, worked by the Wicklow Copper Mining Company, for the years—

	Copper Ore.	Iron Pyrites.	Gross Value.	Sold at Swansea.	Other Ports.
1840	*Tons* 4839	5334	£29,596	—	£29,596
1841	4617	18575	34,493	—	34,493
1842	7549	9023	29,113	£1256	27,857
1843	6555	8376	24,238	5897	18,341

Sir, in my next letter I shall resume the copper mines of Ireland, and make some remarks on the produce, &c., of those of Cuba, Chili, and Australasia. This will naturally involve the question of the effect that the reduction of the duty will have on the home mines, and whether the principles upon which the Act was passed will benefit the industry and trade of the country. I hope also to give you some details of the smelting trade, its history, &c.—PLAIN FACTS: *London, Oct.* 12.

BRITISH COPPER SMELTING COMPANY.

SIR,—I am glad to find that some observations, hastily thrown together, which appeared in the columns of the 23d Sept., have attracted attention, and brought forth the communication of your correspondent, "J. H. M.," whose letter tells me he has not been unmindful of passing events, although it may perchance happen that, while we have one object alone in view, his line of argument, or reasons put forward, might not accord with mine. This, however, is comparatively of little moment, if the effect be produced, which I calculate upon with some confidence. Your correspondent says, that the Act lately passed ought of itself to influence parties, and to promote the formation of a new Copper Smelting Company. On this point I have already given my opinion, for if it were an object to form an independent company, antecedent to the passing of the measure, most certain is it that such course has now become imperative, if that the mining interest of the country is to be protected. I am fully sensible that "protection" is a word which has almost been obliterated from our vocabulary, and that the only course is for the miner and mine adventurer to protect himself; no longer can he depend on the legislature, or his representative in Parliament, while the locust, or vampire, acquires additional power, and revels in the heart's blood of his victim. "J. H. M." very properly observes, that the state of the mining interest is at present bad enough; but he adds, "What must it be when the new bill is fairly in operation?" He states, that the influx of foreign ores, on which the duty has been paid, in the seven months last past, compared with the like period in 1846, is nearly 40 per cent., which I believe he would find comparatively far below the mark, if he takes the actual quantity *imported* in the nine months just ended. I must be excused if I cannot go the "whole hog" with your correspondent, as regards free trade, and the advantages which such a measure is calculated to produce; for he at once admits the late enactment to be destructive to the miner, if that he does not apply himself and his capital to self "protection," and endeavour to rid himself of the necessity now imposed, of placing himself and his interests in the hands of the smelters. But, Sir, this has nothing to do with the question of free trade, nor the introduction of thrashing mills and other machinery; nor is it in any way illustrated by a reference to the monopoly of the East India Company. All this I consider foreign to the purpose; the smelting trade is now as it was 10 or 20 years back; it is a monopoly confined to four or five establishments, who not only possess capital, but command the markets, whether it be in the purchase of ores at the ticketing, or the sale of the metal when smelted. Nothing but an overwhelming force, in the shape of an ample supply of capital—a strong direction of independent and mercantile men—and a determination to be honest, will ever effect the desired end. The principle of free trade has nothing to do with the smelters, except that, with their monopoly, the late Government measure secures to them an increase of ores, and consequent profit on their reduction; but the trade is no more open than before. It requires a determination, as I have before observed, supported by capital; and this will, I fear, not be sufficiently appreciated until the day arrives when those mines *only* which are shallow, and yield large returns at an easy cost, remain in the Ticketing Paper. My own impression is, that public meetings should be held; that the working miner should be fairly represented and supported; and that the mining adventurer should, by a further investment of capital, protect that which he has already embarked; without doing which I feel convinced he will have only to reflect on allowing the moment to pass by, availing himself of which he would have secured "protection," by rendering himself independent of the monopolists.

It is necessary, however, that, in treating on this subject, hasty conclusions should not be arrived at; and I would rather, for one, that the attempt at breaking up the monopoly should never be made, than that it should be attended by failure. It will be seen that the sales of copper ore by public ticketing in Cornwall, during the past 12 months, amounts to upwards of 750,000*l*.—a falling off, I am sorry to find, of some 15 or 20 per cent.; while that of the sales at Swansea are increasing in a far greater ratio, arising from the increasing returns from Australia, Cuba, and Chili, which are likely to be augmented very considerably by the late measure to which I have adverted. If, then, we take the entire produce at 2,000,000*l*., we have to add thereto interest on capital, plant, materials, freight, and cost of reduction, which latter alone, if set down at 15*l*. per ton of cake copper, or (say) 30s. a ton on ore, would give at least 300,000*l*., to be added as additional capital, exclusive of freights and interest. As there is a necessity of having a large supply of ores on hand, not only for admixture, but from it being imperative on the smelters to take the ore off the market at the weekly ticketings, I will assume that the credit of two months on the purchase of the ores is only correspondent to, or met by, the stock in hand, and other advances. Still, it must be admitted, that capital to a large extent (say, 250,000*l*. to 300,000*l*.) is lying unproductive; while the credits given to the consumers of two, four, or six months (say, an average of three months), would, independent of the above sum, require at least half a million of floating capital, which, if divided between the five or six houses at present embarked, would give an investment of capital by each varying from 50,000*l*. to 150,000*l*., if not more. If, then, a company be formed, it is quite clear they would not be warranted in commencing operations without a paid-up capital of from 200,000*l*. to 250,000*l*., which would then be of limited amount, and should have a power to call a like amount, if necessary; and this, I need hardly say, is no trifle in these times. I will not further trespass this week—my object being to keep public attention alive to the subject, which cannot be done better than through the medium of your columns. I wish not to hold out large inducements as to a direct profit arising from the investment in the smelting department, but the "protection" those subscribers will secure to themselves, as miners, or mine adventurers, and thus indirectly derive profitable results.—H. E.: *Oct.* 10. ———

THE LAST QUARTER'S SALES OF COPPER ORE.

SIR,—I am obliged by your ready insertion of my letter, and for the explanation afforded; but I must again claim your indulgence, for, however clear may be the observations made by you, to your own mind, yet I must confess I am so stolid as not exactly to comprehend them. I am sure, Sir, that you will excuse me differing with you on any one point, as I feel well satisfied your object is ever to disseminate information; and, in so doing, your desire is naturally to confine yourself to language best calculated to convey results which may form ground for argument, and from which conclusions may be derived, while your readiness to give insertion to the letters of correspondents, however you may disagree with the views they may entertain on any question propounded, at once convinces me that I may reckon on your courtesy.

In directing your attention last week to the observations made in your leading article of that previous. I quoted therefrom the following paragraph:—"Notwithstanding the decrease in the *produce*," referring to the comparative returns of the two quarters, respectively ending 30th June and the 30th Sept., "there is some room for congratulation that the severe depreciation in price, to which we called attention in our June return of the previous three months, has not marked the quarter just expired;" and you proceed to observe, that "there is but a trifling difference in the proportion of price to produce; while, on that occasion, we had to remark a large increase in quantity, with an extensive diminution in receipts." I then ventured to put forward the grounds on which I considered you had arrived at a false conclusion; inasmuch that, from the figures adduced by you, I showed clearly, that while the ores of the preceding quarter had averaged 4*l*. 14s. per ton, those of the past quarter had only realised 4*l*. 10s.; and that, while the reduction in the quantity of ores sold at the several tickettings was only 992 tons, the amount in money was 12,160*l*. less, which, if I take at 4*l*. 10s. on the ton of ore, the average price for the quarter would give 2700 tons, while the deficit in quantity was only about one-third; and, as I observed in my letter, this difference of 4s. per ton was equal to nearly 8000*l*., or about 1-22nd of the realised amount on the total sales. I did, Sir, expect that, in your note of explanation, you would kindly have furnished me with the data which I had not the opportunity at the moment of referring to—viz.: the relative average produce, standard, and price, for the comparative periods, in the absence of which I have endeavoured to make up a rough estimate, or average, which, however, I conceive will be found somewhat near the mark. You say that you "by no means intended to imply that the mining interests of Cornwall were in a prosperous state, but that, although there was *still* a falling off in the amount of sales and price, they were something more in proportion, and that it was nothing like so serious as the previous quarter, when, although there had been an actual increase of 4356 tons, the amount realised was less by 7442*l*. 18s."

Now, Sir, if I am to take the meaning which I respectfully contend your words would imply, you say there is *some* room for congratulation as regards the past quarter, although I think it is manifestly clear, that a loss of 8000*l*. has been attendant on the sales as compared with the former. The produce for the quarter ending June was 8¼, with an average standard of 89*l*. 11s.; while the average produce for September quarter was 8½ with a standard of 85*l*. 13s.—thus showing an advance of one quarter in the produce, and depreciation of 3*l*. 18s. in the standard. I do not profess to understand the question, but I think I have advanced sufficient to show that there is something wrong; but where—I leave to you to determine; most certain is it I cannot reconcile your arguments with your figures, and, if I mistake not, there is some error in the former. If you would kindly comply with my request, it would be at once rendered clear who is in the right. Apologising for thus further intruding on your columns,

I remain yours, &c., INVESTIGATOR.

[Notwithstanding our correspondent's calculations, and his endeavours to convince ourselves and readers, that the results of the sales of ores were more disastrous in the late than the previous quarter, we must still hold to the opinion expressed in our leading article of the 30th inst., that there is room for congratulation, although "Investigator" contends there must be some error, if not for an increase, yet from the fact that the decrease in the sales of the June quarter, which the opponents of the reduction of duties on foreign ores gloomily prognosticated would be still greater and continuous, have not so turned out; for while in the quarter ending June 30th, the standard had fallen from 97*l*. 18s. to 89*l*. 11s., and the price from 5*l*. 8s. to 4*l*. 13s., respectively 7*l*. 7s. and 15s., with only 1-16th difference in produce, the quarter ending Sept. 30th, has shown a depression of only 2s. 6d. per ton, certainly with the trifling increase of ¼ in produce. The agitation of the question of the abolition of the duties on copper ores, commencing in April last, and terminating only just previous to the expiration of the past quarter, the depressed state of the metal markets, and other circumstances calculated to produce depression in the value of mining produce, was very naturally expected to cause a still greater falling off in the September than in the June quarter. If evil to a certain extent is calculated upon to almost a certainty, and its effects turn out to be much less alarming than was anticipated, there is *some room for congratulation*; and the trifling decrease above, as compared with what was foretold and expected, places us precisely in such position. We refer our correspondent to some statistics in a communication in another column, signed "Commentator;" and, with this explanation, must cease further comments. We are not of those who look only on the dark side of a subject—we believe there is yet in Cornwall the germs of future and lasting prosperity, and look forward with confidence to the commencement of another year, when we hope to congratulate "Investigator" (who is evidently much better acquainted with the subject than he wishes us to believe) on the improved prospects of both miner and adventurer.]

RETURNS OF THE COPPER MINES OF CORNWALL AND DEVON.

SIR,—My attention has been called to the subject of your leading article of last week, treating on the quarterly returns of the principal copper mines of Cornwall and Devon; but if your purpose was to show (which I presume it was) what mines had increased, and what mines had diminished, in their product, comparing the last with the preceding quarter, then, you will permit me to say, that such returns do not give the object you professed, and afford no criterion for the greater part of the mines enumerated, whether they have advanced or receded, by the comparison made—for this reason, that those sell *once* in two months; consequently, sometimes a mine appears in the quarter's returns to have sold once and sometimes twice. A true classification, with a view to show the increase or decrease, can only be made by taking the two quarters together, and comparing this result with that of the antecedent period—that is to say, for such mines that sell only once in two months; and even in those mines which sell every month, they have usually what they call a large sale in one month, and a small sale in the other; hence it follows here that a quarter will not give a fair return, to institute a comparison between that period alone and another.—W. H. V.: *Truro, Oct.* 17.

[We cannot see any importance in our correspondent's objection or suggestion; it is true there may, in some cases, be ore raised at the end of a quarter, which would be sold in the next, and thus appear not to give a correct comparison; but, in a general way, such quarterly returns are perfectly capable of giving a true index of the produce of the several mines, inasmuch as we give them *every* quarter, specifying the number of ticketings. Our remarks last week were principally to call attention to the subject—W. H. V., and all our readers, being thus enabled to compare and judge for themselves.]

MAGNETIC NEEDLE—"ANNALES DES MINES."

SIR,—If you are aware of the exact variation of the magnetic needle, at the present time, I should feel obliged by your stating it in the next number of your Journal. Also, have the goodness to inform me how many numbers of the *Annales des Mines* are published yearly, and what is the annual cost.—A. B.: *Newbridge, Oct.* 16.

[The variation of the magnetic needle is, at the present time, 24° west. The *Annales des Mines* are published every two months in Paris—six numbers to a yearly volume; and may be obtained on application to M. Baillière, publisher, Regent-street. The amount of subscription is, in Paris, 20 fr. per annum; in the departments of France, 24 fr.; and in foreign parts, 28 fr. per annum.]

WHITE'S NEW PATENT GAS.

SIR,—As a subscriber to, and constant and attentive reader of, your really very interesting scientific Journal, as well as being an occasional correspondent, I am induced to trouble you on the subject of some recent squabbles, as to priority of invention of making gas from *tar, water, resin, oil, and other fatty matters*, &c. The disputants come into the field as though every word they uttered was new—eminently new—for the first time. First, some one from Dublin, in one of your recent Numbers, with great warmth, lays priority of claim over Mr. White. Then comes Mr. John North, of Manchester, alleging priority over Mr. White; and then, in your Journal of the week before last (7th instant), comes a furious onslaught by the said Mr. White against Mr. North, alleging total ignorance on the part of Mr. North of all knowledge of CHEMISTRY, scientific attainments, or *philosophy!*—to the knowledge of which, Mr. S. White boldly and unblushingly lays claim. If Mr. White *be a chemist*, I shall show, by his letter, that he, at least, is not an *ingenuous* one. But I will leave Mr. White and the combatants on their very limited stage—almost, if not quite, amounting to the square of zero—to go into the more interesting discoveries and practices that have been made in *now bye-gone* days; and I hope the information I may convey will be read with interest by those *practically* acquainted with gas lighting. In order that I may not be considered as arrogating to myself a position I am not entitled to, I will add, that I have read up, studied, and digested every word and work on gas lighting that I know to have been published before and since its introduction, and think, therefore, I am qualified for the task I undertake. Sir, somewhere about the year 1824, Prof. Donovan, of Dublin, a professor of chemistry, and a very talented man, took out a patent for making gas from WATER: he came to London, and I believe his patent was purchased by one of the London companies, and for the purpose of being shelved; and nothing more was heard of Mr. Donovan, or his *water-gas*. Then comes a patent, also, I think, in the year 1824, for making gas from *tar and water*, taken out by a manufacturing chemist and a gas engineer, both of scientific and practical acquirements. A talented friend of mine, and an intimate friend of the principal in the above patent, knowing how I was connected with gas lighting, employed me to go down to investigate the merits, prospects of success, and what probability of its turning, in a pecuniary point of view, to any beneficial result. Accompanied by my friend, I visited the premises, and met all the parties interested; and a more beautiful and scientific apparatus, adapted most admirably to its purpose, I never saw; the gas was clear and brilliant, generating freely, and no obstacle whatever appeared to its capability of being practically carried out. But, alas! it carried its own seeds of dissolution with it.

Gas made from tar makes an infinitely superior gas to gas made from tar and water—water becoming a dilutent to the extent to which it is used; but decomposing tar into gas was found *then*, as it is now, utterly impracticable; and hence the supposed value of this patent, enabling tar—always a drug and a nuisance—to be decomposed and converted into profitable results, in the shape of commercial gas. The principal proprietor of this patent, with his money invested, was so convinced, from the reasoning I used, and the calculations and statements made, that he said he would gladly have given 500*l.* had he known me three months sooner. This patent was not, however, cushioned.

The talented and eminent engineer of that day, the engineer of the Liverpool Gas-Light and Coke Company, hearing of this patent, and seeing at once the great value it would be to him—his premises literally overflowing with tar—made very advantageous terms with the patentees for liberty to use the patent. The engineer interested in the patent was engaged, on liberal terms, to go down and construct the necessary apparatus, &c., for decomposing the tar into gas. Great expense was gone to in erecting apparatus on the large scale, and much delay ensued; at last, in six or eight months, it was completed and set to work; and what was the result—the mountain produced a mouse—it was found, *on the large scale*, to be absolutely of no practical value, either as to getting rid of the tar or generating gas. What gas it produced cost double or treble what ordinary gas then cost.

Here ended this patent; and it is quietly in-urned "in the tombs of all the Capulets." Hosts of attempts were subsequently made by individuals to decompose *tar* (so great a desideratum was it, and such an expense to store it), each, in their turn, concluding by the mode they adopted that they had found the philosopher's stone; but all failed, as all must fail. Gas made from water produces only hydrogen gas—*a gas giving no light*—and, therefore, by itself, totally unfit for illuminating purposes; but this is remedied by saturating the hydrogen with one or more doses of carbon. Professor Donovan, in his patent, provided for this; but as his patent was never used, these beautiful contrivances did not see the light.

Having brought to your attention some little of what has been done in the shape of *tar* and *water-gas* and *water-gas*, I will now call your attention to the patent that was taken out by those time-honoured and eminent engineers—Messrs. John and Philip Taylor and Martineau, for producing that most beautiful of all discoveries—the making gas from *oil*, patronised by all the nobility and gentry of the kingdom. This, commercially speaking, was found to be too costly in its production to enter into competition with the common cheap article of coal-gas; and, after resorting to several expedients, with the view of reducing the cost, it was found to be a ruinous affair; and, after the expense of many hundreds of thousands of pounds, the whole was obliged to be abandoned—a total loss.

Then comes a host of expedients for converting resin—a cheaper, but considerably inferior, article to *oil*—into oil, to be again converted into gas: this shared the same fate. And then we have the late Prof. Daniel bringing his great mind to the subject, by his taking out a patent for making gas direct from resin; this, however, fared no better fate, and, in common with all the others, came to a premature and untimely end. Surely, Mr. White cannot be acquainted with these long past events, or he never would attempt, at this late day, *with his puny efforts*, to set the "Thames on fire." By the way, Mr. White seems very fond of *water*, which he calls "one of Nature's most bountiful gifts, by whose aid we traverse the *land!(?)* with the rapidity of an eagle's passage," &c.

It is Mr. White's *penchant* for water that induced me to say, *if a chemist*, he was not an *ingenuous* one; for he must know that every drop of water he puts to his tar, resin, &c., deteriorates the gas, notwithstanding his wonderful contrivances (as old as himself) of chains, coke, &c. Father Tom has rather a *rusé* in point here, in a *recipe* for making whiskey punch. Father Tom says, "In making punch first put in the shugar, then put in the whiskey, and every drap of wather you put in arterwards spiles the punch!" I would not willingly be so hard upon Mr. S. White; but from the arrogance and assumption he has used in abusing Mr. North, who I have not the pleasure of knowing; but this I know, that any man who has attempted what Mr. North has, must be a man of scientific attainments, to lead his mind to the study of such pursuits. The wantonness, too, that could induce Mr. S. White to charge Mr. North, from his experiments and his ignorance, of bringing about so dire a calamity as that which recently took place in Albany-street, deserves very severe reprobation.—C. G. E.: *London, Oct.* 16.

COMBINED ATMOSPHERIC AND LOCOMOTIVE SYSTEM.

SIR,—*If* "there is nothing *original* about Mr. Weston," there is certainly something very *feasible* in his plan of combining the atmospheric with the locomotive system, and I am not aware of any one else proposing to use steam in the manner suggested by Mr. Weston in his several systems of railway propulsion. Mr. Nasmyth is the only individual, prior to Mr. Weston, that I recollect ever having proposed the *direct* application of steam to produce atmospheric traction; but his mode of applying it was altogether different from that of Mr. Weston's, and was admitted on all hands to be, although simple, a very extravagant or wasteful mode of employing steam. Mr. Weston's, on the contrary, appears to be not only simple, but highly economical in its working; and, as to its original cost and efficiency, no other system that I have ever heard of will bear any comparison with it; and the more one thinks about it, the more he becomes convinced that it will ultimately supplant every other system. It may truly be said of this invention, that discussion will not retard its progress, and opposition will only accelerate its development—indeed, it appears that all the publicity it has yet received is solely attributable to this last cause. I think, therefore, that instead of Mr. Weston feeling offended with his anonymous opponent, and declining any further notice of his communications, "unless accompanied with his proper signature," he ought rather to be thankful to him, for the opportunity he has furnished for the explanation of so important a part of his inventions, which cannot end otherwise than to Mr. Weston's advantage. Mr. Weston may also remember, that those who are the first to oppose are not always the last to approve; and he should not look upon parties who take the trouble to write about his inventions as enemies, although they may at first pronounce against him; the fact of an individual without any remuneration, devoting his time and talents to the investigation of an invention, is the best evidence that can be adduced of the great interest he feels in the subject; and to win the support of such an individual is of more importance to an inventor than the mere assent of a multitude, who care but little about such things. In support of these views, I need only refer Mr. Weston to the letter of Mr. Grafton in your last Number, from which we may fairly conclude that he has become a convert to Mr. Weston's plans, through reading the explanations given by that gentleman in former Numbers of the *Mining Journal*, and I will venture an opinion that those explanations have secured the approval of parties Mr. Weston little thinks of, including the projector of the submarine railway—nay, of even "Steam" himself! For I agree with the inference Mr. Grafton draws from his silence on the subject, which formerly "He could not for the soul of him understand." If the charge brought against Mr. Weston, of making use of other persons' inventions, be true, so much the better for them; for, of course Mr. Weston will have both to "acknowledge it, and pay for the use of them." But it appears that Mr. Weston "does not claim any of the constituent parts of his mechanical arrangements, or combinations, set forth in his specifications, when considered *per se*, and apart from the purposes of his inventions." And we have it on high authority, "That there may be a valid patent, for a new combination of materials previously in use for the same purposes; or for a new method of applying such materials." And, again, "There are numerous instances of patents which have been granted, where the invention consisted in no more than in the use of things already known, and acting with them in a manner already known, and producing effects already known; but producing those effects so as to be more economically or beneficially enjoyed by the public."

Mr. Weston has, undoubtedly, gathered much information from the inventions of previous patentees; and if, from examining the causes of failure in other systems, he has been enabled to found one that shall succeed, I think he is justly entitled to a large portion of the credit: but it would be highly ungenerous in him (if he could) to deny previous inventors any participation in the results attending that success. And now, Mr. Editor, I have come to the principal object I had in view for addressing you—viz.: to suggest, that if Mr. Weston's inventions for railway propulsion meet with general approval (and I am inclined to think they will), and a company is formed to carry them out, that the unsuccessful inventors of atmospheric systems be permitted to join such company on favourable terms; and if the interests of the various patentees, whose inventions are at present before the public, could be concentrated in one object, their combined energies and intellects directed to its development, there would be some chance of a reward for their labours—whereas, if each inventor devotes himself exclusively to the development of his own particular invention, and cries down every other, the conflicting interests and opinions of all may prevent the adoption of either, until their inventions shall have become public property, when they will have the mortifying reflection, that for the want of union amongst themselves, they have permitted their labours to be thrown away, and its legitimate rewards to be enjoyed by others. Let railway inventors take a lesson from railway boards. If "amalgamation" is desirable with the former, how much more so is it for the latter?—R. M.: *Portman-square, Oct.* 17.

WHISHAW'S INSULATING PIPES.

[Specification of patent granted to Francis Whishaw, of Hampstead, Middlesex, civil engineer, for a certain manufacture of pipes of earthenware, pottery, and glass, and of certain applications and arrangements thereof. Patent dated March 9, 1848.]

This invention has for its object the providing pipes, channels, or ducts, of any convenient form, suitable for the passage of the wires of electric telegraphs in a state of insulation, and other purposes, wherein a number of separate pipes, or channels, may be required; or wherein pipes of earthenware, or pottery, of great uniformity of structure, and certain combinations of pipes of those materials, and of glass, may be employed with advantage. Such being the objects in view, the invention consists—firstly, in the formation of any required number of pipes, channels, or ducts, within one and the same mass or external surface of earthenware, or pottery—the shape and arrangement of such pipes, channels, or ducts, and the form of the external surface, being adapted to the required circumstance—secondly, in the mode of manufacturing pipes of earthenware, or pottery, where pipes of peculiar uniformity of surface and consistency of material are required, whether as a cluster of pipes, channels, or ducts, within the same mass, or to be employed singly, in the usual manner—thirdly, in certain combinations and arrangements of pipes of earthenware, pottery, and glass—fourthly, in a certain mode of combining pipes of earthenware, pottery, and glass, so as to render them air-tight at their junctions.

As regards the first part of my invention, the formation of any required number of pipes, channels, or ducts, in one or the same mass of material, so as to be adapted for the insulation of the wires on an electrical telegraph, and other purposes, may be effected, or carried into practice, in various ways. These pipes, channels, or ducts, are interstices, surrounded by the solid material of the earthenware, or pottery, and in this manner constitute a series, or cluster, of separate pipes, or channels of communication within, as it were, one main pipe, or external surface. These pipes, or clusters of pipes, are manufactured in lengths of about two or three feet, as may be convenient, and united in the manner hereafter described. Pipes of this description may be composed, or formed, of almost any clay, or material, used in the manufacture of pottery, or tile, although the inventor prefers the ordinary Dorsetshire and Devonshire clay, or material, used in stone pottery, and well known in the trade, to which may be advantageously added crushed or powdered pottery ware. The machinery, or apparatus, employed for the manufacture of such pipes consists of an open cylinder, or box, suitably mounted on standards, containing the mixed clay, or material, to form the pipes, with a plate, acting as a piston, or plunger, at one end of the cylinder, which plate is made to press the clay through a suitably formed die, called or known in the trade by the name of a "dod," fixed at the reverse end of the open cylinder. The clay, or material, being formed into the required shape by pressure through the dod, or die, is allowed to dry; and the subsequent processes at present in use for the manufacture of earthenware pipes are proceeded with, until the length of the pipes is completed. The lengths of pipe may be united as at present, by means of a socket joint, formed at one end of the length, to receive the reverse end of another length—the several lengths of pipes, after becoming hardened by exposure to heat, being brought together in this order of arrangement, and firmly united by means of a cement run into the socket, and filling up the space around the end of the length of pipe inserted therein.

The several lengths of pipe may be united by means of another kind of joint, hereafter to be described, or by any other description of joint that may be preferred. The fitting of these several lengths of pipes, in such a manner as to bring the cavities, or internal pipes, together with the requisite accuracy, is secured by forming in the manufacture thereof a slight register line, or mark, outside the pipe, or external covering, which serves as a guide to the workman in pulling the lengths of pipe. In this manner a continuous pipe, or length of pipe, is produced, or formed. In order to form curved pipes, or junctions, intended to unite two pipes extending in different directions, plaster moulds are employed, such as are commonly used for making curved pipes, and pipes made in the ordinary way, except that curved rods have to be fixed in gauge plates, or other suitable contrivance, at each end of the mould, for the purpose of forming the cavities, or internal pipes, corresponding with those made in the straight pipe, of which the required curved pipe is to form the continuation. These curved pipes, when formed, are united to the straight pipes while the material is soft, in the same manner as is usual in the manufacture of ordinary earthenware pipes. These curved, or junction pipes, may also be formed by cutting up a straight pipe in such manner, that, when placed in a curved mould, and bent to its shape, they may be joined together, and form a curved pipe.

The mode and machinery adopted for manufacturing the said pipes consists in the use of a cylinder, open at both ends, containing the material to be worked, such cylinder being fixed to suitable standards, and mounted on an axis, or pivot, turning in bearings affixed to the side standards, so as to allow of its being turned down when required to receive a fresh charge of material. A plate is fixed over the cylinder, and made to pass into it (loosely fitting the interior) by means of a vertical screw, suitably actuated, the dod, or die, resting upon a ring formed at bottom of the cylinder, the plate of which forms a bottom thereto, and prevents the material passing out, except through the elongated aperture, or mouth, formed in it. Solid iron rods are affixed, in order to act as cores during the formation of the length of pipe, and to displace the portion of material forced through the elongated aperture, or mouth, of the dod, in the space which they occupy, thus forming internal cavities, or channels, down the whole length of pipe, as the clay, or material is pressed forward. These rods are attached to carrying pieces, of such shape as not to interfere with the required free passage of the material through the elongated mouth of the dod, the form of the latter tending to facilitate the passage of the material as required. To receive the pipe as it emerges from the dod, a sliding table, or rest, is provided.

In order to accelerate the manufacture of these pipes, a dod, or die, is used, with two or more apertures, or mouths, and sets of rods, or cores, thereby forming two or more lengths of pipes at a time, and it is obvious that, by enlarging the cylinder and increasing the power for driving the plate, and the number of elongated apertures, or mouths, in the dod, the number of lengths of pipe manufactured at one time may be increased. It is also obvious that other modes of pressing, or forcing, the clay through the dod, or die, may be employed. The lengths of pipe being formed, or manufactured, are placed to dry, and afterwards straightened on the outside by means of the ordinary straightening box, made of wood, or plaster of Paris, and in halves; the internal pipes, or channels, being cleared, if necessary, by passing through them a rod, with a piece of leather, or other suitable material, at the end. These internal pipes, or channels, in the curved pipe, may be cleared when required by means of curved rods, or pieces of flexible material, as cane, gutta percha, &c., drawn through them. The lengths of pipe thus straightened have their socket, or other joint, formed upon them in the ordinary manner, and are afterwards hardened by exposure to heat, as usual, the common mode of glazing both the internal and external surface being employed. Lastly, these lengths of pipe are united together in the ordinary manner, the workman only taking care to follow the register mark, or line, previously made on the outside for his guidance. Although the above relates only to pipes of circular form externally, the patentee does not intend to confine himself to such form of pipes, inasmuch as, by varying the form of the shaping part of the dod, or die, a corresponding variety of form may be given to the external surface of the pipe manufactured therein. Also, by varying the form and disposition of the cores, a corresponding variety may be produced in the internal formation of the pipes. Two other forms of pipes are exhibited.

As regards the second part of this invention—the manufacture of a cluster of pipes already described, or of single pipes, by means of a conical dod, or die. The variation of the dod, or die, now to be described from that in ordinary use, consists simply in its affording a longer space for the clay, or material, to pass through in its course of forming the length of pipe, thereby obviating the present liability to crack, sometimes produced in the pipe by the division of the particles of the clay, or material, in its passage over the bridge, or support, to the core. The clay, or material, is, by means of this improved dod, pressed firmly and compactly together, before it leaves the aperture, or mouth of the dod, in the shape of a manufactured length of pipe. The extra length of passage for the clay, or material, through the dod, or die, and the compacting pressure of the same are secured, by elongating the aperture, or mouth, and the core.

As regards the third part of the invention, consisting of certain combinations of pipes of earthenware, pottery, and glass. Lengths of clusters of pipes are combined together in any of the modes already described, or instead of employing such clusters, separate pipes are combined by means of a collar of a cluster of pipes cementing such separate pipes into the collars, or instead of employing separate pipes of earthenware, or pottery, separate pipes of glass are combined by means of a collar of such cluster of pipes. Also, pipes of earthenware, or pottery, of the ordinary construction are employed in combination with internal plugs of a cluster of pipes of short lengths, such pipes and plugs being held together by external collars, cemented in the usual manner. In the combination last described, the plugs serve as the insulators of the wires, but it will be obvious that the derangement of any one wire might destroy the insulation of the others; this mode is not so secure as by the use of the cluster of pipes firstly described.

Fourthly, this invention consists in a peculiar mode of combining pipes of earthenware, pottery, and glass, so as to render them air-tight at the junctions, by a cement formed of asphalte, or of gutta percha, which is well adapted for the purpose. The joint thus formed will preclude the passage of air, gas, or other fluid, out of the main pipe. Pipes manufactured with these air-tight joints, as a connection for their several lengths of pipe, will be suitable for every variety of speaking telegraph, hydraulic telegraph, and for gas and water-pipes, and for other uses requiring an air-tight pipe, or communication.

Having thus described the nature of the invention, and the mode employed of carrying the same into effect, the patentee desires it to be understood, that he claims, as the invention intended to be secured by the letters patent granted to him—1. A cluster of pipes, channels, or ducts, of earthenware, or pottery, combined together in the same mass, or within the same external surface, as above described.—2. The manufacture of pipes of earthenware, or pottery, by means of a conical die, or dod, as above described.—3. The manufacture, combination, and arrangement, of pipes of earthenware, pottery, or glass, with suitable collars and plugs, as above described.—4. The combining pipes of earthenware, pottery, and glass, by means of air-tight joints, constructed and arranged as above described.

Patent-office and Designs Registry, 210, *Strand, Oct.* 11.

INSULATION OF ELECTRIC TELEGRAPH WIRES.—There has been lately much correspondence in the *Mechanics' Magazine* on the subject of insulation, among which Mr. Hammerton proposes, as an improvement, the introduction of gutta percha tubes, fastened by zinc brackets to the posts, in lieu of the glazed earthenware. In the number for Saturday last, a Mr. Andrews states that the proposed plan is no improvement at all. In wet weather the outside surfaces of the tubes would of course become wet, and in that condition they are good conductors; a little wind would suffice to drive the rain into the enclosure of the lips, and thus a connection would be formed, not only with the earth, but with all the insulators—the proposed zinc belts would offer increased facilities of communication one with the other. It is not only common rain, but heavy mists, and a fine penetrating drizzling rain, which are the great enemies of the telegraph, and during which the gutta percha would be wet throughout their entire surfaces, while the glazed earthenware collects the water, and discharges it in drops. He proposes a glazed earthenware tube 6 or 7 inches long, and 1 inch in diameter, perforated at the bottom with a number of small holes to within an inch of the centre on either side. In the middle of the tube he would fix a piece of earthenware in the centre, with three radii, through which the wire would pass, and at both extremities would be fixed other pieces of earthenware, pear shaped, and hollow, overlapping the tube about 1 inch; these would keep the ends dry, and any little water which might find its way into the tube would escape by the holes, while the caps would form good protectors when the air was loaded with vapours.

SAFETY PRESSURE GAUGE FOR GAS-WORKS.—In the manufacture of gas there are many circumstances under which accidents are very likely to occur; for instance, if the pipes which conduct the gas happen to become obstructed by deposits of crystalised napthaline, or carbonate, or hypo-sulphate of ammonia, there are great dangers of explosions. Any neglect in the complicated arrangements of the valves will form an obstruction, and by preventing the free flow of the gas generated in the retorts into the gasometers, an explosion is the result. The only means at present in general use to call attention to the state of the gas in the tubes is the ordinary pressure guage, which is under many circumstances insufficient. M. Magnier communicated at the last sitting of the Paris Academy of Sciences, a plan for an apparatus for giving timely warning of any obstruction to the passage of the gas, which is simple and inexpensive. He terms it a "safety pressure gauge," and consists of a small bottle-shaped vessel, with two orifices, one of which is attached to the glass tube forming the ordinary pressure gauge. To the other of these orifices is attached a whistle, in such manner that whenever any obstruction or excess of pressure occurs, a loud warning is given. Water is introduced into the pressure gauge which communicates with the gas apparatus, on which the pressure is reproduced, and all the variations of pressure, to several inches of water, can be traced; but, if greater than ordinary, the water contained in the pressure gauge is forced into the bottle, and the gas, in escaping through the orifice, acts on the whistle, producing a sound which gives notice of danger, and which sound becomes so much louder as the pressure increases, thus giving sufficient timely notice to avoid danger.

ROWAN'S FLUCTUATING STEAM-ENGINE SLIDE.—This slide, which can readily be adapted to any engine, is arranged for the purpose of regulating the admission of steam to the engine cylinders, according to the varying work to be performed. When the engine is brought up to the required speed, the governor balls are half extended, and when the engine receives an accession of load, the balls of course converge, when they elevate the slide in the frame which acts upon the valve, and lifts it up, holding it longer in that position. On the contrary, when any machinery is thrown off, the balls of course immediately extend, causing the slide to shift in the other direction, and cut off the steam sooner, so that the engine adapts itself to whatever load it has to move, increasing or decreasing.

NORTH BRITISH RAILWAY.—By the completion and opening of the great bridges over the Tyne and Tweed on the North British, passengers are now enabled to travel by the east coast route to Edinburgh and Glasgow without change of carriage. The train leaving Edinburgh at half-past 9 A.M., reaches York at half-past 3, and London soon after 10.

GENERAL TELEGRAPH COMPANY.

—This company are now prepared to undertake the EXECUTION, by CONTRACT or OTHERWISE, of the most approved ELECTRIC, HYDRAULIC, PNEUMATIC, and MECHANICAL TELEGRAPHS.—Particulars of which may be ascertained by application at the company's temporary offices, 6, Gray's Inn-square, London.

FRANCIS WHISHAW, } General
NATHL. J. HOLMES, } Managers.

TIMBER PRESERVING COMPANY.—(PAYNE'S PATENTS FOR THE PRESERVATION OF TIMBER AGAINST DRY ROT, FIRE, RAVAGES OF WORMS, &c.

The above company are ready to ENTER into ARRANGEMENTS for the PREPARATION OF TIMBER, at any of their under-mentioned stations—viz.:

Whitehall Wharf, Westminster	Barnstaple	Guildford
Fleetwood-on-Wyre	Leicester	Southampton
Wisbeach	Lynn	Hartlepool
Gateshead	Staines	Darlington

And they will erect the necessary apparatus, wherever there is a considerable quantity of timber to be prepared.—Further particulars, with prices, may be obtained at the London Works, Whitehall Wharf, Cannon-row, Westminster.

RIDER'S RAILWAY BRIDGE.—TO RAILWAY COMPANIES.

—This BRIDGE has now been for 18 months in DAILY USE (having a double track) on the HARLEM RAILWAY, in the State of New York, United States. The Erie Railway and the Newhaven Railway Companies have likewise adopted it.

Several other bridges, for ordinary purposes, are also being constructed.

The advantages of this over all other iron bridges hitherto invented, consist in the small amount of iron required, compared with the strength obtained, in avoiding the use of any surplus weight of material, in the consequent economy of its construction, and also from its lightness, easy mode of putting together, and facility of transport, in its peculiar adaptation for foreign use.

As regards economy, it can be erected at a cost not exceeding that of a WOODEN BRIDGE, of equal capability.

Applications to be made to Mr. Moulton, the patentee, Bradford, Wilts.

NEW ATMOSPHERIC RAILWAY.—NO LONGITUDINAL VALVE.

—The CYLINDER may be constructed of CAST-IRON TUBES, of any convenient length—like the mains of gas or water pipes. Here an immense saving of expense will be at once effected.

These TUBES can be UNITED TOGETHER, perfectly air-tight, and a piston can be constructed to work therein—air-tight also. This accomplished, the inventor engages to preserve, for a motive-power, as perfect a vacuum as can be made; and he further engages to communicate this power, with little or no loss, from the inside of the cylinder to the outside, for the PROPULSION of RAILWAY CARRIAGES, and the rails now used will answer well.—CAPITALISTS' ATTENTION IS CALLED TO THE ABOVE.

No attention will be given to communications, except made through some London solicitor, of known standing in the profession.

*** Address "O. L. Z.," Post-office, Battersea, near London.

NEW ATMOSPHERIC APPARATUS, OR RAILWAY. NO LONGITUDINAL VALVE.

The CYLINDER may be constructed of CAST-IRON TUBES, of any convenient length—like the mains of gas or water pipes. Here an immense saving of expense will be at once effected.

These TUBES can be UNITED TOGETHER, perfectly air-tight, and a piston can be constructed to work therein—air-tight also. This accomplished, the inventor engages to preserve, for a motive-power, as perfect a vacuum as can be made; and he further engages to communicate this power, with little or no loss, from the inside of the cylinder to the outside, for the several purposes the same may be applied to—as for the PROPULSION of RAILWAY CARRIAGES—for the raising of water to heights not limited by atmospheric pressure—and, indeed, the APPARATUS will be FOUND AVAILABLE for very many other purposes,—CAPITALISTS' ATTENTION IS CALLED TO THE ABOVE.

No attention will be given to communications, except made through some London solicitor, of known standing in the profession.

*** Address "O. L. Z.," Post-office, Battersea, near London.

BRISTOL AND EXETER RAILWAY.—CALL OF FIVE POUNDS PER SHARE

—being the Fourteenth Instalment, and making, with former calls, the sum of £90 per share.

The directors of this company, under the provisions of the Act of Parliament, hereby give Notice, that the proprietors of £100 shares are required to PAY, on or before the 30th day of October next, at any of the under-mentioned banks, the sum of FIVE POUNDS on each of their respective shares—viz.:

LONDON—Messrs. Glyn, Halifax, and Co.
LIVERPOOL—The Bank of Liverpool.
MANCHESTER—Messrs. William Jones, Loyds, and Co.
BRISTOL—Messrs. Miles, Harford, and Co.
Messrs. Baillie, Ames, and Co.
Messrs. Stuckey and Co.
The West of England and South Wales District Bank.
The National Provincial Bank.
EXETER—The Devon and Cornwall Banking Company.
The West of England and South Wales District Bank.
The National Provincial Bank.
Messrs. Sanders and Co.
} Or at either of their branches.

The bankers are instructed to *charge* interest, at the rate of 5 per cent. per annum, on all arrears, and to *allow* interest, *at the same rate*, on payments in anticipation of calls.

By order of the directors, J. B. BADHAM, Secretary.

Office, 30, Broad-street, Bristol, Sept. 27, 1847.

BRISTOL AND EXETER RAILWAY—THIRD SHARES.

—CALL of TWO POUNDS TEN SHILLINGS per THIRD SHARES—being the Seventh Instalment, and making, with former calls, the sum of £27 10s. per third share.

The directors of this company, under the provisions of the Acts of Parliament, hereby give Notice, that the proprietors of Third Shares are required to PAY, on or before Monday, the 30th of October next, at any of the under-mentioned banks, the sum of TWO POUNDS TEN SHILLINGS on each of their respective Third Shares:—

LONDON—Messrs. Glyn, Halifax, Mills, and Co.
LIVERPOOL—The Bank of Liverpool.
MANCHESTER—Messrs. William Jones, Loyds, and Co.
BRISTOL—Messrs. Miles, Harford, and Co.
Messrs. Baillie, Ames, and Co.
Messrs. Stuckey's Banking Company.
The West of England and South Wales District Bank.
The National Provincial Bank.
EXETER—The Devon and Cornwall Banking Company.
The National Provincial Banking Company.
The West of England and South Wales District Bank.
Messrs. Sanders and Co.
} Or at either of their branches.

Who are instructed to *charge* interest, at 5 per cent. per annum, on all arrears, and to *allow* interest, *at the same rate*, on payments in anticipation of calls.

By order of the directors, J. B. BADHAM, Secretary.

Office, 30, Broad-street, Bristol, Sept. 27, 1848.

LAP-WELDED IRON TUBES,

W. H. RICHARDSON, Jun., and CO.,
MANUFACTURE every description of WROUGHT-IRON TUBES, for Locomotive and Marine Boilers, Gas, Steam, and other purposes.

PATENT TUBE WORKS,
DARLASTON, STAFFORDSHIRE.

PATENT IMPROVEMENTS IN CHRONOMETERS,

WATCHES AND CLOCKS.—E. J. DENT, 82, Strand, and 33, Cockspur-street, watch and clock maker, BY APPOINTMENT, to the Queen and his Royal Highness Prince Albert, begs to acquaint the public, that the manufacture of his chronometers, watches, and clocks, is secured by three separate patents, respectively granted in 1836, 1840, 1842. Silver lever watches, jewelled in four holes, 6 gs. each; in gold cases, from £8 to £10 extra. Gold horizontal watches, with gold dials, from 8 gs. to 12 gs. each.

DENT'S PATENT DIPLIEDOSCOPE,

or Meridian Instrument, is now ready for delivery.—Pamphlets containing a description and directions for its use 1s. each, but to customers gratis.

UNDER BRITISH AND FOREIGN LETTERS PATENT.

CAPITALISTS are INVITED to INSPECT the SECURE and PROFITABLE INVESTMENT in HUTCHISON & CO.'S INDURATED and IMPERVIOUS STONE, Chalk, Sand, Plaster, Wood, and Carton-roof Sheeting WORKS. Paving in diamond courses, supplied at Calverly Quarry, Tunbridge Wells, at 6d. per foot super, perfectly compact and impervious. Other orders executed.—Also, *à la Maladrerie*, near Caen, France.—Chief offices, East Temple Chambers, No. 2, Whitefriars-street, London, where specimens and particulars may be seen.—Licenses granted also for Hutchison's Patent SAW FRAMES.

COAL MARKET, LONDON.

PRICE OF COALS PER TON AT THE CLOSE OF THE MARKET.

MONDAY.—Bate's West Hartley 15 6—Buddle's West Hartley 16 3—Chester Main 14—Dean's Primrose 13 6—Hasting's Hartley 16 3—Holywell Main 15 6—New Tanfield 14 North Percy Hartley 15 6—Ord's Redheugh 13 9—Pontop Windsor 13 9—Stewart's Hartley 15—Tanfield Moor 15 6—Tanfield Moor Butes 14—Wylam 14 6—Wall's End Bewicke and Co. 16—Bensham 14 6—Heaton 16—Hotspur 15 3—Killingworth 15 3—Percy Bensham 15 3—Eden Main 16 9—East Hetton 15—Hetton 17 6—Haswell 18—Lambton 17 3—Shotton 16 3—Stewart's 17 9—Hudson's Hartlepool 15 6—Heugh Hall 16—Kelloe 16—South Hartlepool 16 3—Trimdon 16—Benson 15—Seymour Tees 16—Tees 17 3—Whitworth 14 9—Derwentwater Hartley 16—Hartley 15 9—Nixon's Merthyr 21.—Ships at market, 164; sold, 58.

WEDNESDAY.—Bate's West Hartley 16—Buddle's West Hartley 16 6—Carr's Hartley 16 6—Charlotte 15 6—Chester Main 15—Dean's Primrose 13 9—Hasting's Hartley 16 6—Holywell Main 16—Londonderry Hartley 14 6—New Tanfield 14—North Percy Hartley 16—Ord's Redheugh 14—Tanfield Moor 15 6—Tanfield Moor Butes 14—Townley 15—Walbottle Hartley 15 6—West Hartley 17—Eden Main 17—Lambton Primrose 17 3—Derwentwater Hartley 16—Howard's West Hartley Netherton 16 6—Hartley 15 6—Wall's End Barnard 16 3—Bewicke and Co. 16 9—Clarke and Co. 15—Gosforth 16 6—Hedley 16 9—Hartop 16 3—Killingworth 16 3—Northumberland 15 9—Percy Bensham 16—Wharncliffe 16 6—Belmont 17 6—Bell 17 3—Hetton 19—Haswell 19—Lambton 18 6—Morrison 16 9—Russell's Hetton 18 6—Shotton 17 3—Stewart's 19—Caradoc 17 9—Cassop 17 3—Eden Hartlepool 15 3—Heugh Hall 16 9—Kelloe 17—South Hartlepool 17 3—Adelaide Tees 17 9—Seymour Tees 16 9 to 17—South Durham 16 6—Tees 18 6—West Cornforth 16 9—Whitworth 15—Elgin 16.—Ships at market, 126; sold, 70.

FRIDAY.—Bate's West Hartley 16—Buddle's West Hartley 16 6—Carr's Hartley 16 9—Chester Main 15 3—Dean's Primrose 14 3—Hartlepool West Hartley 16—Hasting's Hartley 16 6—Holywell Main 16 6—Londonderry Hartley 15—North Percy Hartley 16—Ord's Redheugh 14 6—Tanfield Moor 16—Tanfield Moor Bute's 14 6—Townley 15 6—West Hartley 17—Wall's End Bewicke and Co. 19—Gosforth 18 6—Hedley 19—Harton 18—Hotspur 17 9—Northumberland 17 9—Percy Bensham 18 6—Eden Main 19—Lambton Primrose 19—Hetton 20—Haswell 20—Morrison 18 3—Russell's Hetton 20—Stewart's 20—Whitwell 19—Heugh Hall 19—South Hartlepool 19 3—Trimdon 19—Adelaide Tees 19—Denison 18 6—Seymour Tees 19—Derwentwater Hartley 16—West Hartley Netherton 16 9—Hartley 16 3—Nixon's Merthyr 21—Elgin 16 3.—Ships, 63; sold, 38.

BRITISH SOUTHERN WHALE FISHERIES. PROSPECTUS,

Founded on a "STATEMENT" (to be had on application at the undermentioned place), "EXPLANATORY OF THE NECESSITY AND MEANS OF RE-ESTABLISHING THE ABOVE IMPORTANT BRANCH OF THE NATIONAL INDUSTRY."

It is proposed—1. That a company be formed for re-establishing the British Southern Whale Fisheries, by prosecuting them from the Auckland Islands, under the title of the British Southern Whale Fishery Company.

2. That the capital of the said company be £300,000, in 6000 shares of £50 each, and that power be given to augment it to an amount to be defined by the Board of Trade.

3. That when one-third of the required capital is subscribed, a board of not less than 12 directors be appointed from amongst the shareholders.

4. That the deposit be £2 10s. per share, and that this be paid at such time and place as the board of directors, when appointed, shall name.

5. That those who may record their names as shareholders be subjected to no liability until the foregoing preliminaries are fulfilled, and then only to the extent of their several subscriptions, as will be stipulated by the charter already promised.

6. That a Deed of Settlement, to be approved by the President of the Board of Trade, be afterwards executed by the shareholders.

7. That the instalments on the shares be called for by the board of directors as circumstances may require.

Messrs. C. H. and G. Enderby, who are the Crown grantees of the Auckland Islands, have constituted themselves a provisional committee to receive and grant applications for shares, until the board of directors enter on their functions.

All communications and inquiries, with reference to the project, may be addressed to Messrs. Enderby, or to Mr. Preston, whom they have authorised to act provisionally as secretary in the matter, and who will be prepared to furnish all necessary information, as also forms of application for shares, at the temporary offices, 8, Crosby-square, Bishopsgate, where attendance will be given daily from 10 till 5 o'clock. Applications for shares may also be made through Messrs. Tatham, Upton, Johnson, and Co., solicitors, 20, Austinfriars.

IRISH AMELIORATION SOCIETY.

IN COURSE OF BEING INCORPORATED BY ROYAL CHARTER.
Capital £500,000, in £10 shares.
The Right Hon. LORD DE MAULEY, Chairman.
Major-General DUNCAN M'LEOD, Chairman of Committee of Works.
OFFICES—2, WATERLOO-PLACE, PALL-MALL, and 6, KING WILLIAM-STREET, CITY.

For the employment of the peasantry in the preparation (by a simple patented process, the exclusive property of the society), of PEAT, FUEL, and CHARCOAL, for Metallurgical, Manufacturing, Agricultural, and Sanitary purposes—ensuring large profits to the shareholders; and, by removing the peat, rendering the land fit for immediate cultivation.

Applicants for shares will not become liable, under any circumstances, for more than the amount of shares they may agree to take, as they will not be required to sign any deed until the charter shall have been granted—so limiting their liability; and nothing will be required, beyond the 1s. per share deposit, until the first station shall have proved the undertaking successful. JAMES BLAKE, Secretary.

CWMSTRELLYN SLATE COMPANY.

Capital £10,000, in shares of £10 each—1000 shares. Deposit £5 per share.

The responsibility of shareholders is limited to the amount of their shares.

The slate trade in North Wales has, in nine cases out of ten, been found a safe and lucrative speculation for the investment of capital, through whose agency—whether emanating from conjoint or individual enterprise—the inexhaustible mineral treasures of apparently barren masses of rock and mountain ranges have been explored and turned to the account of the courageous adventurers. In this way fortunes have been made in the course of a few years—whereas the risk is small—the outlay being comparatively trifling in proportion to the extent of contributors.

From the margin of Cwmstrellyn Lake rises an immense slate rock, or, properly speaking, slate bed. With the view of testing the properties of this slaty formation, openings have been made, from which the most satisfactory results have ensued—proving to a certainty the existence of slate, of excellent quality and colour.

The reports of the engineers sent to view the place, confirm the expectations raised by the success which has attended the experiments.

It is proposed, therefore, to form a company, and raise sufficient funds for working Cwmstrellyn Slate Quarry. Favourable terms can be obtained from the proprietor—viz., a lease, for the full term of 60 years, with a royalty of 1th, to commence at the expiration of six years' working, on payment of £1000, or a royalty of 1-12th, after the quarry shall have been working three years, on payment of £500, at the option of the company.

The advantages are—ample space on the spot—from 20 to 30 acres, if required—for the deposit of waste, immense water-power for the working machinery, and easy accesss to the shipping port of Portmadoc, distant six miles. By opening a communication with the public road (three miles from the quarry), the facilities of a tramroad would be rendered available.

Any further particulars that may suggest themselves to persons disposed to take shares in the above company, can be had on application personally, or by letter, to R. M. Griffith, Esq., Bangor, North Wales, at whose office the engineer's report and surveyor's plan may be seen.

STEAM TO INDIA AND CHINA, VIA EGYPT.—Regular

MONTHLY MAIL (steam conveyance) for PASSENGERS and LIGHT GOODS to CEYLON, MADRAS, CALCUTTA, PENANG, SINGAPORE, and HONG-KONG.

THE PENINSULAR AND ORIENTAL STEAM NAVIGATION COMPANY BOOK PASSENGERS and RECEIVE GOODS and PARCELS for the ABOVE PORTS by their steamers—starting from Southampton on the 20th of every month; and from Suez on or about the 10th of every month.

BOMBAY.—Passengers for Bombay can proceed by this company's steamers of the 29th of the month, to Malta, thence to Alexandria by her Majesty's steamers, and from Suez by the Honourable East India Company's steamers.

MEDITERRANEAN.—MALTA—On the 20th and 29th of every month. CONSTANTINOPLE—On the 29th of the month. ALEXANDRIA—On the 20th of the month.

SPAIN AND PORTUGAL.—Vigo, Oporto, Lisbon, Cadiz, and Gibraltar, on the 7th, 17th, and 27th of the month.

ITALY.—Genoa, Leghorn, and Civita Vecchia, occasional trips—next departure 18th of November, 1848.

For plans of the vessels, rates of passage-money, and to secure passages, and ship cargo, apply at the company's offices, No. 122, Leadenhall-street, London; and 57, High-street, Southampton.

NOTICE TO SHIPPERS OF GOODS AND PARCELS,

per PENINSULAR AND ORIENTAL STEAM NAVIGATION COMPANY'S STEAMERS, to INDIA and CHINA.—GOODS and PARCELS sent direct to the company's parcel office, on or before 6 P.M., on the 17th of each month, are forwarded at less cost to shippers than when sent through any intermediate channel. Cases must not exceed 112 lbs. weight each, for Aden, Ceylon, Madras, Calcutta, and China; and 40 lbs. each case for Bombay. No package for India or China can, under any circumstances, be shipped at Southampton, unless it be cleared through the Custom-house, and placed alongside the steamer by noon on the 19th of each month.

Detailed particulars can be obtained on personal application, or by writing.

Parcel Department, 122, Leadenhall-street.

FOURDRINIER'S PATENT SAFETY APPARATUS, for PREVENTING ACCIDENTS IN MINES AND OTHER PLACES, WHEN THE ROPE OR CHAIN BREAKS.

By the ADOPTION of this INVENTION the LIVES of the WORKING MINERS may be PRESERVED, and the PROPERTY of the MINE OWNERS PROTECTED from the serious consequences of either of the following accidents—viz.:

1. From the men, or the load, being precipitated to the bottom of the shaft when the rope or chain breaks: in this case the apparatus is *self-acting*.

2. From either the men, or load, being drawn over the pulley: in this case, also, the apparatus is *self-acting*.

3. From the fearful consequences to men or load of a "whirl," or run: in this case the result is equally *certain*.

A COAL PIT, with the SAFETY APPARATUS ATTACHED to the CAGE, is daily at WORK near BURSLEM, in the STAFFORDSHIRE POTTERIES.

To inspect the apparatus, or to obtain any further information, application may be made Mr. Edward N. Fourdrinier (the patentee), Cheddleton, near Leek, Staffordshire; or Mr. Joseph Fourdrinier, 9, College-place, Camden Town, London—who are prepared GRANT LICENSES for the USE of the PATENT.

DESICCATING OR DRYING PROCESS—DAVISON and SYMINGTON'S PATENT.

—To MANUFACTURERS and OTHERS requiring DRYING POWER, this PROCESS has been pronounced by those who have adopted it nearly three years, "as surpassing every thing before seen or tried, for efficiency, purity, cleanliness, cheapness, expedition," and, it may be added—safety. It has already been applied to no less than 15 distinct branches of trade, with equal and most perfect success, from the drying of the thinnest paper or the most delicate fabric, to the roasting of coffee, and such like substances; in other words, generating a continuous and controllable temperature, varying from that of the atmosphere to 500° and 600°, if required, and attended with many important advantages, not obtainable by hot flues, cockles, steam, hot-water pipes, &c.

For Licenses, and other particulars, apply to Mr. ANGUS JENNINGS, Secretary, at the offices of the Patent Desiccating Company, 41, Gracechurch-street, City.

DESICCATED OR SEASONED WOOD—DAVISON and SYMINGTON'S PATENT.

—For all BUILDING PURPOSES, JOINERY, CABINET-WORK, MUSICAL and other INSTRUMENTS, or wherever thoroughly SEASONED MATERIAL is required, for this and tropical climates, this PROCESS EFFECTS, in the SEASONING OF WOOD—more in weeks, than years can accomplish in the ordinary way. The gums are hardened, the fibre increased in strength, and shrinkage, as well as decay, prevented. The invention having been accurately tested, and adopted, by Her Majesty Honourable Board of Ordnance, and extensively by the leading architects and builders, in the erection of public and other buildings—by cabinet-makers and musical instrument-makers, amongst others, in the execution of the most expensive workmanship—the company feel themselves warranted in recommending the invention, as worthy of universal adoption, both as regards economy and efficiency.

For Licenses to use the patent, and every other information, apply to Mr. ANGUS JENNINGS, Secretary, at the offices of the company, 41, Gracechurch-street, City.

*** The company have works situated near the Commercial Docks, Rotherhithe, where wood, to any extent, can be sawn and desiccated.—Apply to Mr. Girling, manager, Grand Surrey Saw-Mills, Plough-bridge, Rotherhithe.

GUTTA PERCHA.—BOOTS and SHOES, SOLED with this

MATERIAL, being eminently non-conductors of heat, are exceedingly pleasant wear for tender feet, and however slight the soles, impenetrable by showers or salt-water—therefore, invaluable to SPORTSMEN, TOURISTS, and VISITORS to the SEA-SIDE. The idea that atmospheric heat has any detrimental effect upon Gutta Percha is a *fallacy*, and in no known instance have soles failed in adhering, which may not be ascribed to neglect of the company's printed directions. The more recent productions in Gutta Percha are elaborate cornices, highly enriched console tables, mouldings, panellings, picture-frames, &c., in every variety of finish and relief, dessert services, flower vases, fountains, inkstands, medallions, buckets, bowls, bottles, paper weights, pen trays, &c. Tubing of all sizes, from 1th of an inch to 4 inches diameter. For lining cisterns, sinks, galvanic troughs and batteries, Gutta Percha offers innumerable advantages; and, being impervious to water, unaffected by acids, alkalies, &c., it may fairly be said to be the discovery of the age.—May be had of the GUTTA PERCHA COMPANY, 18, Wharf-road, City road, and of any of their wholesale dealers.

IMPROVED LIFTING JACKS,

MANUFACTURED BY
W. AND J. GALLOWAY,
PATENT RIVET WORKS,
MANCHESTER.

*** The attention of parties who employ **Lifting Jacks,** is respectfully requested to the superiority of those annexed, over those hitherto in use.

IMPROVED RATCHET JACK.

HALEY'S PATENT LIFTING JACK.

PATENT FLEXIBLE INDIA-RUBBER PIPES AND TUBING,

for Railway Companies, Brewers, Distillers, Fire-Engines, Gas Companies, Gardening and Agricultural purposes, &c.

THE PATENT VULCANISED INDIA-RUBBER HOSE-PIPES are made to stand *hot liquor* and *acids*, without injury—do not become *hard* or *stiff* in any temperature (but are always perfectly flexible); and as they require NO APPLICATION of oil or dressing, are particularly well adapted for *Fire Engines, Pumps, Gas, Beer-Engines, Gardens*, and all purposes where a *perfectly Flexible Pipe* is required.

Made all sizes, from ¼-inch bore upwards, and of any length to order.

Vulcanised India Rubber Garden Hose, fitted with brass-taps, Copper branch and Rose's complete, ready to be attached to pumps, water-butts, or cisterns.

Sole manufacturer, JAMES LYNE HANCOCK,
Goswell Mews, Goswell-road, London.

N.B.—Vulcanised India-Rubber Washers, of all sizes, for joints of hot-water and steam-pipes, and *Vulcanised Sheet Rubber*, any thickness, for all kinds of joints, and other purposes

PATENT ALKALI COMPANY'S IRON PAINT.—This

PAINT is the PRODUCT of a PATENT PROCESS, and possesses PECULIAR and VALUABLE PROPERTIES, not otherwise attainable.

Its colour (as at present produced) is a rich *purple-brown*. It is perfectly free from the deleterious qualities of white lead.

It surpasses all other paints ever yet discovered, in point of *durability* and *economy*.

Two coats of this paint are more than equal to three of any other description.

From its chemical composition, it is pre-eminently adapted for covering *iron*; also *wood*, and *stuccoed*, or *brick buildings*. The process by which the base of this paint is produced, makes it impossible that any change should take place in its composition from atmospheric influence. Its identity with iron secures it from galvanic action, so fatal to the durability of lead and other paints on iron work.

It has been exposed on shipping to the action of sea-water, and of the sulphuretted hydrogen, so prevalent in sea-ports and tidal harbours, for more than three years, without change.

Its *cheapness* and *strength* render it peculiarly suitable for *iron bridges, roofs*, and *railings, farm buildings*, and *shipping*. It will also cover creosoted timber.

Price, by the ton, £25, delivered in London, exclusive of packages.

Agents will be appointed for the principal towns in the United Kingdom; in the mean time, orders may be addressed to the offices of the company, No. 20, Fenchurch-street, London. JOHN A. WEST, Secretary.

STEPHENS'S DYES FOR STAINING WOOD as a SUBSTITUTE FOR PAINT

—For DECORATING CHURCHES, LARGE PUBLIC ROOMS and THEATRES, as well as PRIVATE DWELLINGS, giving the effect of oak, mahogany, or satin wood.

When economy in expenditure of material and time is of importance, these dyes will be found of the greatest advantage, as they give a rich colour to plain woods, while they reflect all the beauty of the natural graining, which is so superior to imitations by art, and, at the same time, avoid the disagreeable smell and deleterious consequences of paint.

The DYES, or STAINS, are prepared and sold by HENRY STEPHENS, 54, Stamford-street, Blackfriars-road, London, in bottles of 6d. and 1s. each, and at 8s. per gallon.—They may be obtained in powder at 8s. per lb., which dissolves in water to form the liquid, and 1 lb. will make one gallon of grain. Sold also at the office of *The Builder*, 2, York-street, Covent-garden, London; also, by Hopkins and Purvis, Greek-street.

N.B.—The trade supplied.

Also his COMPOSITIONS FOR WRITING WITH STEEL PENS.

STEPHENS'S WRITING FLUIDS compose the most splendid and durable colours, and the most indelible compositions which art can produce. They consist of—

A BLUE FLUID, changeable into an intense black colour.

PATENT UNCHANGEABLE BLUE FLUIDS, remaining a deep blue colour. Two sorts are prepared—a light and dark blue.

A superior BLACK INK, of the common character, but more fluid.

A superior CARMINE RED, for contrast writing.

A liquid ROUGE CARMINE, for artists and contrast writing, in glass bottles.

A carbonaceous RECORD INK, which writes instantly black, and being proof against any chemical agent, is most valuable in the prevention of frauds.

A liquid MECHANICAL and ARCHITECTURAL DRAWING INK, superior to Indian Ink.

MARKING INKS for linen; select STEEL PENS; INKHOLDERS.

Prepared by the inventor, HENRY STEPHENS, 54, Stamford-street, Blackfriars-road, London; and sold by all booksellers and stationers everywhere,

In Bottles, at 1d., 2d., 3d., 6d., 1s., and 3s.

SIR W. BURNETT'S PATENT FOR THE PRESERVATION OF TIMBER, CANVAS, &c.

This PROCESS hardens and improves the texture of wood. It enters into permanent chemical combination with the ligneous fibre, and does not come to the surface of the wood by efflorescence, like other crystallisable salts; and no amount of washing or boiling in water will remove the chemical compound so formed.

It PRESERVES WOOD and OTHER ARTICLES from the adherence of ANIMAL and VEGETABLE PARASITES, and also from the attacks of INSECTS.

It completely PRESERVES WOOD from WET and DRY ROT.

It renders the WOOD PERFECTLY UNINFLAMMABLE, when used of a certain requisite strength.—See Letter, dated "*Admiralty, August* 14, 1845.

"SIR,—In reply to your letter of the 9th inst., with its inclosure from Sir William Burnett, I am commanded by my Lords Commissioners of the Admiralty to transmit to you for the information of Lord Stanley, a copy of a report from the officers at Portsmouth Yard, upon the effects of his solution, applied to the purpose of preventing ignition in timber, or, rather, to prevent it breaking into flames. In consequence of that report, my Lords have ordered the bulk-heads in the holds and magazines in her Majesty's ships to be fitted with timber so saturated, and it is also applied largely to the various buildings in her Majesty's dockyards.

"I send, for Lord Stanley's further information, a copy of a statement of the price per load of preparing timber for building purposes.

"G. W. Hope, Esq., &c., &c." (Signed) "W. A. B. HAMILTON. Secretary.

ITS EFFECTS ON CANVAS, CORDAGE, COTTON, &c.

The preparation preserves these articles from mildew and rot. It renders them more pliable; does not in the slightest degree discolour them; and washing or boiling in water will not remove the combination from their fibres.

Further information may be obtained, specimens seen, and special terms entered into, when the quantity of materials to be Burnettized is large, on application to Mr. JACKSON, Secretary,

AT THE OFFICES, 53, KING WILLIAM-STREET, LONDON-BRIDGE.

RAILWAY AND OTHER IMPORTANT RECORDS, EFFECTUALLY PROTECTED FROM DAMP AND VERMIN.

Extract from the Appendix to the Second Report of the Commissioners on the Fine Arts.

"In 1839, I superintended the construction of a house, of three stories, on the Lac d'Enghein. The foundation of the building is constantly in water, about 19½ inches below the level of the ground floor. The entire horizontal surface of the external and internal walls was covered at the level of the internal ground floor with a layer of

SEYSSEL ASPHALTE,*

less than half an inch thick, over which coarse sand was spread. Since the above date, no trace of damp has shown itself round the walls of the lower story, which are, for the most part, painted in oil, of a grey stone colour. It is well known that the least moisture produces round spots, darker or lighter, on walls so painted. Yet the pavement of the floor, resting on the soil itself, is only about 2½ inches above the external surface of the soil, and only 19½, at the utmost, above that of the sheet of water. The layer of asphalte having been broken and removed, for the purpose of inserting the sills of two doors, spots, indicating the presence of damp, have been since remarked at the base of the door-posts.

The DIRECTORS of the SEYSSEL ASPHALTE COMPANY have much pleasure in recommending to the notice of ENGINEERS and ARCHITECTS the application of the ASPHALTE of SEYSSEL, as the *only effectual* mode of preventing damp in basement floors, and water from percolating through the ARCHES of a VIADUCT.

The arrangements of this company enable works of any extent to be executed with the greatest promptitude. I. FARRELL, Secretary.

SEYSSEL ASPHALTE DEPOT, STANGATE, LONDON.
ESTABLISHED 1838.

* This method has been adopted at the New Houses of Parliament.

PROFESSIONAL LIFE ASSURANCE COMPANY,

Connecting the Clerical, Legal, Military, Naval, and Medical professions, and holding out advantages to the public not hitherto offered by any similar institution.

Incorporated.—Capital £250,000.

Established upon the mixed, mutual, and proprietary principle.

Rates essentially moderate.—Every description of policy granted. Immediate, survivorship, and deferred annuities; and endowments to widows, children, and others.—Every policy (except only in cases of personation) indisputable.—The assured permitted to go to and reside in Canada, Nova Scotia, New Brunswick, Australasia, Madeira, Cape of Good Hope, and Prince Edward's Island, without additional premium.—Medical men remunerated for their reports.—Loans granted on real or personal security.—One-tenth of the entire profits appropriated for the relief of the assured while living, and of his widow and orphans.—Annuities granted in the event of blindness, insanity, paralysis, accidents, and any other bodily or mental affliction, disabling the parties. Persons of every class and degree admitted to all the advantages of the corporation.—Rates for insuring £100 at the age of 25, 35, 45, and 55, respectively—namely, £1 14s. 6d., £2 5s. 6d., £3 4s. 3d., and £4 18s. 6d.

Prospectuses, with full details, may be had at the office.—Applications requested from parties desirous of becoming agents. EDWARD BAYLIS, Actuary and Secretary.

Offices, 76, Cheapside, London.

London: Printed by RICHARD MIDDLETON, and published by HENRY ENGLISH (the proprietors), at their offices, No. 26, FLEET-STREET, where all communications are requested to be addressed. [*October* 21, 1848.